

APPENDIX K

FLORA INVENTORY

Common Name	Scientific Name	COSEWIC	SARA	ESA	S-Rank
Vascular Plants					
Balsam fir	<i>Abies balsamea</i>	-	-	-	S5
Striped maple	<i>Acer pensylvanicum</i>	-	-	-	S5
Red maple	<i>Acer rubrum</i>	-	-	-	S5
Sugar maple	<i>Acer saccharum</i>	-	-	-	S4S5
Common yarrow	<i>Achillea millefolium</i>	-	-	-	SNA
Rough bent grass	<i>Agrostis scabra</i>	-	-	-	S5
Green alder	<i>Alnus alnobetula</i>	-	-	-	S5
Speckled alder	<i>Alnus incana</i>	-	-	-	S5
Downy serviceberry	<i>Amelanchier arborea</i>	-	-	-	S4S5
Pearly everlasting	<i>Anaphalis margaritacea</i>	-	-	-	S5
Bog rosemary	<i>Andromeda polifolia</i>	-	-	-	S5
Howell's pussytoes	<i>Antennaria howellii</i>	-	-	-	S4S5
Bristly sarsaparilla	<i>Aralia hispida</i>	-	-	-	S5
Wild sarsaparilla	<i>Aralia nudicaulis</i>	-	-	-	S5
Arethusa	<i>Arethusa bulbosa</i>	-	-	-	S4
Black chokeberry	<i>Aronia melanocarpa</i>	-	-	-	S5
Northeastern lady fern	<i>Athyrium angustum</i>	-	-	-	S5
English daisy	<i>Bellis perennis</i>	-	-	-	SNA
Yellow birch	<i>Betula alleghaniensis</i>	-	-	-	S5
Heart-leaved birch	<i>Betula cordifolia</i>	-	-	-	S5
Paper birch	<i>Betula papyrifera</i>	-	-	-	S5
Gray birch	<i>Betula populifolia</i>	-	-	-	S5
Fringed brome	<i>Bromus ciliatus</i>	-	-	-	S5
Bluejoint reed grass	<i>Calamagrostis canadensis</i>	-	-	-	S5
Pickering's reed grass	<i>Calamagrostis pickeringii</i>	-	-	-	S5
Wild calla	<i>Calla palustris</i>	-	-	-	S4
Tuberous grass pink	<i>Calopogon tuberosus</i>	-	-	-	S4S5
Hedge false bindweed	<i>Calystegia sepium</i>	-	-	-	S5
Pennsylvania bittercress	<i>Cardamine pensylvanica</i>	-	-	-	S5
Black sedge	<i>Carex arctata</i>	-	-	-	S5
Atlantic sedge	<i>Carex atlantica</i>	-	-	-	S4
Silvery sedge	<i>Carex canescens</i>	-	-	-	S5
Fibrous-root sedge	<i>Carex communis</i>	-	-	-	S5
Fringed sedge	<i>Carex crinita</i>	-	-	-	S5
Two-seeded sedge	<i>Carex disperma</i>	-	-	-	S5

Common Name	Scientific Name	COSEWIC	SARA	ESA	S-Rank
Star sedge	<i>Carex echinata</i>	-	-	-	S5
Yellow sedge	<i>Carex flava</i>	-	-	-	S5
Northern long sedge	<i>Carex folliculata</i>	-	-	-	S5
Nodding sedge	<i>Carex gynandra</i>	-	-	-	S5
Marsh straw sedge	<i>Carex hormathodes</i>	-	-	-	S4S5
Inland sedge	<i>Carex interior</i>	-	-	-	S4S5
Bladder sedge	<i>Carex intumescens</i>	-	-	-	S5
Slender sedge	<i>Carex lasiocarpa</i>	-	-	-	S5
Sallow sedge	<i>Carex lurida</i>	-	-	-	S5
Boreal bog sedge	<i>Carex magellanica</i>	-	-	-	S5
New England sedge	<i>Carex novae-angliae</i>	-	-	-	S5
Few-flowered sedge	<i>Carex pauciflora</i>	-	-	-	S4S5
Necklace sedge	<i>Carex projecta</i>	-	-	-	S5
Broom sedge	<i>Carex scoparia</i>	-	-	-	S5
Awl-fruited sedge	<i>Carex stipata</i>	-	-	-	S5
Tussock sedge	<i>Carex stricta</i>	-	-	-	S5
Twisted sedge	<i>Carex torta</i>	-	-	-	S5
Three-seeded sedge	<i>Carex trisperma</i>	-	-	-	S5
Northern beaked sedge	<i>Carex utriculata</i>	-	-	-	S5
Leatherleaf	<i>Chamaedaphne calyculata</i>	-	-	-	S5
Fireweed	<i>Chamaenerion angustifolium</i>	-	-	-	SNA
White turtlehead	<i>Chelone glabra</i>	-	-	-	S5
Small enchanter's nightshade	<i>Circaea alpina</i>	-	-	-	S5
Interrupted fern	<i>Claytonomunda claytoniana</i>	-	-	-	S5
Field bindweed	<i>Convolvulus arvensis</i>	-	-	-	SNA
Goldthread	<i>Coptis trifolia</i>	-	-	-	S5
Bunchberry	<i>Cornus canadensis</i>	-	-	-	S5
Pink lady's-slipper	<i>Cypripedium acaule</i>	-	-	-	S5
Flattened oat grass	<i>Danthonia compressa</i>	-	-	-	S5
Poverty oat Grass	<i>Danthonia spicata</i>	-	-	-	S5
Queen Anne's lace	<i>Daucus carota</i>	-	-	-	SNA
Round-branched tree-clubmoss	<i>Dendrolycopodium dendroideum</i>	-	-	-	S5
Hickey's tree-clubmoss	<i>Dendrolycopodium hickeyi</i>	-	-	-	S4
Eastern hay-scented fern	<i>Dennstaedtia punctilobula</i>	-	-	-	S5

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Wavy-leaved broom moss	<i>Dicranum polysetum</i>	-	-	-	S5
Northern bush honeysuckle	<i>Diervilla lonicera</i>	-	-	-	S5
Hairy flat-top white aster	<i>Doellingeria umbellata</i>	-	-	-	S5
Spoon-leaved sundew	<i>Drosera intermedia</i>	-	-	-	S5
Round-leaved sundew	<i>Drosera rotundifolia</i>	-	-	-	S5
Mountain wood fern	<i>Dryopteris campyloptera</i>	-	-	-	S5
Spinulose wood fern	<i>Dryopteris carthusiana</i>	-	-	-	S5
Crested wood fern	<i>Dryopteris cristata</i>	-	-	-	S5
Evergreen wood fern	<i>Dryopteris intermedia</i>	-	-	-	S5
Three-way sedge	<i>Dulichium arundinaceum</i>	-	-	-	S5
Needle spikerush	<i>Eleocharis acicularis</i>	-	-	-	S5
Blunt spikerush	<i>Eleocharis obtusa</i>	-	-	-	S5
Common spikerush	<i>Eleocharis palustris</i>	-	-	-	S5
Slender spikerush	<i>Eleocharis tenuis</i>	-	-	-	S5
Black crowberry	<i>Empetrum nigrum</i>	-	-	-	S5
Northern willowherb	<i>Epilobium ciliatum</i>	-	-	-	S4S5
Trailing arbutus	<i>Epigaea repens</i>	-	-	-	S5
Water horsetail	<i>Equisetum fluviatile</i>	-	-	-	S5
Rough fleabane	<i>Erigeron strigosus</i>	-	-	-	S5
White buttons	<i>Eriocaulon aquaticum</i>	-	-	-	S5
Narrowleaf cotton-grass	<i>Eriophorum angustifolium</i>	-	-	-	S5
Common boneset	<i>Eupatorium perfoliatum</i>	-	-	-	S5
Common eyebright	<i>Euphrasia nemorosa</i>	-	-	-	SNA
Grass-leaved goldenrod	<i>Euthamia graminifolia</i>	-	-	-	S5
American beech	<i>Fagus grandifolia</i>	-	-	-	S3S4
Fringed black bindweed	<i>Fallopia ciliatodis</i>	-	-	-	S5
Red fescue	<i>Festuca rubra</i>	-	-	-	S5
Wild strawberry	<i>Fragaria virginiana</i>	-	-	-	S5
Black ash	<i>Fraxinus nigra</i>	Threatened	-	Threatened	S2
Creeping snowberry	<i>Gaultheria hispidula</i>	-	-	-	S5
Eastern teaberry	<i>Gaultheria procumbens</i>	-	-	-	S5
Black huckleberry	<i>Gaylussacia baccata</i>	-	-	-	S5
Dwarf huckleberry	<i>Gaylussacia bigeloviana</i>	-	-	-	S5
Northern comandra	<i>Geocaulon lividum</i>	-	-	-	S3S4

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Canada manna grass	<i>Glyceria canadensis</i>	-	-	-	S5
Fowl manna grass	<i>Glyceria striata</i>	-	-	-	S5
Common oak fern	<i>Gymnocarpium dryopteris</i>	-	-	-	S5
Spotted hawkweed	<i>Hieracium maculatum</i>	-	-	-	S5
Azure bluet	<i>Houstonia caerulea</i>	-	-	-	S5
Shining firmoss	<i>Huperzia lucidula</i>	-	-	-	S5
Canada St John's-wort	<i>Hypericum canadense</i>	-	-	-	S5
Pale St John's-wort	<i>Hypericum ellipticum</i>	-	-	-	S5
Pinesap	<i>Hypopitys monotropa</i>	-	-	-	S4
Mountain holly	<i>Ilex mucronata</i>	-	-	-	S5
Harlequin blue flag	<i>Iris versicolor</i>	-	-	-	S5
Canada rush	<i>Juncus canadensis</i>	-	-	-	S5
Soft rush	<i>Juncus effusus</i>	-	-	-	SNR
Bayonet rush	<i>Juncus militaris</i>	-	-	-	S5
Slender rush	<i>Juncus tenuis</i>	-	-	-	S5
Common juniper	<i>Juniperus communis</i>	-	-	-	S5
Sheep laurel	<i>Kalmia angustifolia</i>	-	-	-	S5
Pale bog laurel	<i>Kalmia polifolia</i>	-	-	-	S5
Tamarack	<i>Larix laricina</i>	-	-	-	S5
Oxeye daisy	<i>Leucanthemum vulgare</i>	-	-	-	SNA
Scotch lovage	<i>Ligusticum scoticum</i>	-	-	-	S5
Twinflower	<i>Linnaea borealis</i>	-	-	-	S5
Water lobelia	<i>Lobelia dortmanna</i>	-	-	-	S5
Canada fly honeysuckle	<i>Lonicera canadensis</i>	-	-	-	S5
Common woodrush	<i>Luzula multiflora</i>	-	-	-	S5
Running clubmoss	<i>Lycopodium clavatum</i>	-	-	-	S5
One-cone clubmoss	<i>Lycopodium lagopus</i>	-	-	-	S4
Northern water horehound	<i>Lycopus uniflorus</i>	-	-	-	S5
Northern starflower	<i>Lysimachia borealis</i>	-	-	-	S5
Swamp yellow loosestrife	<i>Lysimachia terrestris</i>	-	-	-	S5
Wild lily-of-the-valley	<i>Maianthemum canadense</i>	-	-	-	S5
Large false solomon's seal	<i>Maianthemum racemosum</i>	-	-	-	S4S5
Three-leaved false soloman's seal	<i>Maianthemum trifolium</i>	-	-	-	S5
Green adder's-mouth	<i>Malaxis unifolia</i>	-	-	-	S4S5

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Common apple	<i>Malus domestica</i>	-	-	-	SNA
Cucumber root	<i>Medeola virginiana</i>	-	-	-	S5
American cow wheat	<i>Melampyrum lineare</i>	-	-	-	S5
White sweet-clover	<i>Melilotus albus</i>	-	-	-	SNA
Partridgeberry	<i>Mitchella repens</i>	-	-	-	S5
Blunt-leaved sandwort	<i>Moehringia lateriflora</i>	-	-	-	S5
Northern bayberry	<i>Morella pensylvanica</i>	-	-	-	S5
Sweet gale	<i>Myrica gale</i>	-	-	-	S5
Three-leaved rattlesnakeroot	<i>Nabalus trifoliolatus</i>	-	-	-	S5
Southern twayblade	<i>Neottia bifolia</i>	-	-	-	S3
Heart-leaved twayblade	<i>Neottia cordata</i>	-	-	-	S4
Wood rustwort	<i>Nowellia curvifolia</i>	-	-	-	S5
Variegated pond-lily	<i>Nuphar variegata</i>	-	-	-	S5
Whorled wood aster	<i>Oclemena acuminata</i>	-	-	-	S5
Bog aster	<i>Oclemena nemoralis</i>	-	-	-	S5
Perennial evening primrose	<i>Oenothera perennis</i>	-	-	-	S5
Sensitive fern	<i>Onoclea sensibilis</i>	-	-	-	S5
Royal fern	<i>Osmunda regalis</i>	-	-	-	S5
Cinnamon fern	<i>Osmundastrum cinnamomeum</i>	-	-	-	S5
Common wood sorrel	<i>Oxalis montana</i>	-	-	-	S5
Water smartweed	<i>Persicaria amphibia</i>	-	-	-	S4S5
Arrow-leaved smartweed	<i>Persicaria sagittata</i>	-	-	-	S5
Reed canarygrass	<i>Phalaris arundinacea</i>	-	-	-	S5
Northern beech fern	<i>Phegopteris connectilis</i>	-	-	-	S5
Common timothy	<i>Phleum pratense</i>	-	-	-	SNA
Norway spruce	<i>Picea abies</i>	-	-	-	SNA
White spruce	<i>Picea glauca</i>	-	-	-	S5
Black spruce	<i>Picea mariana</i>	-	-	-	S5
Red spruce	<i>Picea rubens</i>	-	-	-	S5
Meadow hawkweed	<i>Pilosella caespitosa</i>	-	-	-	SNA
Mouse-ear hawkweed	<i>Pilosella officinarum</i>	-	-	-	SNA
Red pine	<i>Pinus resinosa</i>	-	-	-	S4S5
Eastern white pine	<i>Pinus strobus</i>	-	-	-	S5
Common plantain	<i>Plantago major</i>	-	-	-	SNA

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Seaside plantain	<i>Plantago maritima</i>	-	-	-	S5
White fringed orchid	<i>Platanthera blephariglottis</i> <i>var. blephariglottis</i>	-	-	-	S4S5
Club spur orchid	<i>Platanthera clavellata</i>	-	-	-	S5
Rose pogonia	<i>Pogonia ophioglossoides</i>	-	-	-	S4S5
Christmas fern	<i>Polystichum</i> <i>acrostichoides</i>	-	-	-	S5
Juniper haircap moss	<i>Polytrichum juniperinum</i>	-	-	-	S5
Large-toothed aspen	<i>Populus grandidentata</i>	-	-	-	S5
Trembling aspen	<i>Populus tremuloides</i>	-	-	-	S5
Common silverweed	<i>Potentilla anserina</i>	-	-	-	S5
Rough cinquefoil	<i>Potentilla norvegica</i>	-	-	-	S5
Creeping cinquefoil	<i>Potentilla reptans</i>	-	-	-	SNA
Old field cinquefoil	<i>Potentilla simplex</i>	-	-	-	S5
Common self-heal	<i>Prunella vulgaris</i>	-	-	-	S5
Pin cherry	<i>Prunus pensylvanica</i>	-	-	-	S5
Black cherry	<i>Prunus serotina</i>	-	-	-	S5
Bracken fern	<i>Pteridium aquilinum</i>	-	-	-	S5
Shinleaf	<i>Pyrola elliptica</i>	-	-	-	S5
Northern red oak	<i>Quercus rubra</i>	-	-	-	S5
Rhodora	<i>Rhododendron canadense</i>	-	-	-	S5
Common Labrador tea	<i>Rhododendron</i> <i>groenlandicum</i>	-	-	-	S5
White beakrush	<i>Rhynchospora alba</i>	-	-	-	S5
Shining rose	<i>Rosa nitida</i>	-	-	-	S4S5
Swamp rose	<i>Rosa palustris</i>	-	-	-	S4
Alleghaney blackberry	<i>Rubus allegheniensis</i>	-	-	-	S5
Cloudberry	<i>Rubus chamaemorus</i>	-	-	-	S4
Bristly dewberry	<i>Rubus hispidus</i>	-	-	-	S5
Red raspberry	<i>Rubus idaeus</i>	-	-	-	S5
Dwarf red raspberry	<i>Rubus pubescens</i>	-	-	-	S5
Bebb's willow	<i>Salix bebbiana</i>	-	-	-	S5
Balsam willow	<i>Salix pyrifolia</i>	-	-	-	S5
Northern purple pitcher-plant	<i>Sarracenia purpurea</i> ssp. <i>purpurea</i>	-	-	-	S5
Black-girdled bulrush	<i>Scirpus atrocinctus</i>	-	-	-	S5
Common woolly bulrush	<i>Scirpus cyperinus</i>	-	-	-	S5
Marsh skullcap	<i>Scutellaria galericulata</i>	-	-	-	S5
Sticky ragwort	<i>Senecio viscosus</i>	-	-	-	SNA

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Three-toothed cinquefoil	<i>Sibbaldia tridentata</i>	-	-	-	S5
Common water parsnip	<i>Sium suave</i>	-	-	-	S5
Canada goldenrod	<i>Solidago canadensis</i>	-	-	-	S4S5
Gray-stemmed goldenrod	<i>Solidago nemoralis</i>	-	-	-	S4S5
Downy goldenrod	<i>Solidago puberula</i>	-	-	-	S5
Rough-stemmed goldenrod	<i>Solidago rugosa</i>	-	-	-	S5
Northern bog goldenrod	<i>Solidago uliginosa</i>	-	-	-	S5
American mountain ash	<i>Sorbus americana</i>	-	-	-	S5
White meadowsweet	<i>Spiraea alba</i>	-	-	-	S5
Steeplebush	<i>Spiraea tomentosa</i>	-	-	-	S5
Slender ladies'-tresses	<i>Spiranthes lacera</i>	-	-	-	S5
Prairie cordgrass	<i>Sporobolus michauxianus</i>	-	-	-	S5
Rose twisted-stalk	<i>Streptopus lanceolatus</i>	-	-	-	S5
Calico aster	<i>Symphyotrichum lateriflorum</i>	-	-	-	S5
Canada yew	<i>Taxus canadensis</i>	-	-	-	S4S5
Eastern marsh fern	<i>Thelypteris palustris</i>	-	-	-	S5
Tufted clubrush	<i>Trichophorum cespitosum</i>	-	-	-	S5
Rabbit's-foot clover	<i>Trifolium arvense</i>	-	-	-	SNA
Yellow clover	<i>Trifolium aureum</i>	-	-	-	SNA
White clover	<i>Trifolium repens</i>	-	-	-	SNA
Seaside arrowgrass	<i>Triglochin maritima</i>	-	-	-	S5
Painted trillium	<i>Trillidium undulatum</i>	-	-	-	S5
Eastern hemlock	<i>Tsuga canadensis</i>	-	-	-	S4
Broad-leaved cattail	<i>Typha latifolia</i>	-	-	-	S5
Horned bladderwort	<i>Utricularia cornuta</i>	-	-	-	S5
Late lowbush blueberry	<i>Vaccinium angustifolium</i>	-	-	-	S5
Large cranberry	<i>Vaccinium macrocarpon</i>	-	-	-	S5
Velvet-leaved blueberry	<i>Vaccinium myrtilloides</i>	-	-	-	S5
Small cranberry	<i>Vaccinium oxycoccos</i>	-	-	-	S5
Wild celery	<i>Vallisneria americana</i>	-	-	-	S2S3
Common speedwell	<i>Veronica officinalis</i>	-	-	-	SNA
Northern wild raisin	<i>Viburnum cassinoides</i>	-	-	-	S5
Tufted vetch	<i>Vicia cracca</i>	-	-	-	SNA

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Marsh blue violet	<i>Viola cucullata</i>	-	-	-	S5
Bryophytes					
Three-lobed whipwort	<i>Bazzania trilobata</i>	-	-	-	S5
Stairstep moss	<i>Hylocomium splendens</i>	-	-	-	S5
Pellucid plait moss	<i>Hypnum imponens</i>	-	-	-	S5
White pincushion moss	<i>Leucobryum glaucum</i>	-	-	-	S5
Feathery neckera moss	<i>Neckera pennata</i>	-	-	-	S5
Red-stemmed feather moss	<i>Pleurozium schreberi</i>	-	-	-	S5
Common haircap moss	<i>Polytrichum commune</i>	-	-	-	S5
Electrified cat's-tail moss	<i>Rhytidiadelphus triquetrus</i>	-	-	-	S5
Northern peat moss	<i>Sphagnum capillifolium</i>	-	-	-	S5
Feathery peat moss	<i>Sphagnum cuspidatum</i>	-	-	-	S5
Brown peat moss	<i>Sphagnum fuscum</i>	-	-	-	S5
Green peat moss	<i>Sphagnum girgensohnii</i>	-	-	-	S5
Red peat moss	<i>Sphagnum rubellum</i>	-	-	-	S5
Soft peat moss	<i>Sphagnum tenellum</i>	-	-	-	S5
Crisped pincushion moss	<i>Ulota crispa</i>	-	-	-	S5
Lichens					
Shaggy fringed lichen	<i>Anaptychia palmulata</i>	-	-	-	S3S4
Fishnet lichen	<i>Cladonia boryi</i>	-	-	-	S5
British soldiers lichen	<i>Cladonia cristatella</i>	-	-	-	S5
Giant cladonia lichen	<i>Cladonia maxima</i>	-	-	-	S5
Dragon lichen	<i>Cladonia squamosa</i>	-	-	-	S5
Star-tipped reindeer lichen	<i>Cladonia stellaris</i>	-	-	-	S5
Black-footed reindeer lichen	<i>Cladonia stygia</i>	-	-	-	S3?
Ladder lichen	<i>Cladonia verticillata</i>	-	-	-	S5
Snakeskin liverwort	<i>Conocephalum conicum</i>	-	-	-	SNA
Roughened shingle lichen	<i>Fuscopannaria ahlneri</i>	-	-	-	S3
Blue jellyskin lichen	<i>Leptogium azureum</i>	-	-	-	SNA
Lungwort lichen	<i>Lobaria pulmonaria</i>	-	-	-	S5
Textured lungwort lichen	<i>Lobaria scrobiculata</i>	-	-	-	S5
Naked kidney lichen	<i>Nephroma bellum</i>	-	-	-	S3

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Rimmed elf-ear lichen	<i>Normandina pulchella</i>	-	-	-	S4
Mealy-rimmed shingle lichen	<i>Pannaria conoplea</i>	-	-	-	S4S5
Brown-eyed shingle lichen	<i>Pannaria rubiginosa</i>	-	-	-	S4
Black-bordered shingles lichen	<i>Parmeliella triptophylla</i>	-	-	-	S5
Blue felt lichen	<i>Pectenota plumbea</i>	Special Concern	Special Concern	Vulnerable	S3
Common freckle pelt lichen	<i>Peltigera aphthosa</i>	-	-	-	S5
Tree pelt lichen	<i>Peltigera collina</i>	-	-	-	S3
Peppered pelt lichen	<i>Peltigera evansiana</i>	-	-	-	S4S5
Eastern waterfan	<i>Peltigera hydrothyria</i>	Threatened	Threatened	Threatened	S1
Brown-gray moss-shingle lichen	<i>Protopannaria pezizoides</i>	-	-	-	S5
Yellow specklebelly lichen	<i>Pseudocyphellaria holarctica</i>	-	-	-	S5
Mustard lichen	<i>Pyxine soledata</i>	-	-	-	S5
Frayed ramalina lichen	<i>Ramalina roesleri</i>	-	-	-	S5
Frosted glass-whiskers lichen	<i>Sclerophora peronella</i>	Special Concern	Special Concern	-	S3S4
Northern coral lichen	<i>Sphaerophorus globosus</i>	-	-	-	S4
Exotic					
Field bindweed	<i>Convolvulus arvensis</i>	-	-	-	SNA
Queen Anne's lace	<i>Daucus carota</i>	-	-	-	SNA
Spotted hawkweed	<i>Hieracium maculatum</i>	-	-	-	S5
Pale St John's-wort	<i>Hypericum ellipticum</i>	-	-	-	S5
White sweet-clover	<i>Melilotus albus</i>	-	-	-	SNA
Norway spruce	<i>Picea abies</i>	-	-	-	SNA
Meadow hawkweed	<i>Pilosella caespitosa</i>	-	-	-	SNA
Mouse-ear hawkweed	<i>Pilosella officinarum</i>	-	-	-	SNA
Rabbit's-foot clover	<i>Trifolium arvense</i>	-	-	-	SNA
Yellow clover	<i>Trifolium aureum</i>	-	-	-	SNA
SAR and SOCI					
Shaggy fringed lichen	<i>Anaptychia palmulata</i>	-	-	-	S3S4
Finger ring lichen	<i>Arctoparmelia incurva</i>	-	-	-	S3S4
a Stubble lichen	<i>Chaenotheca brachypoda</i>	-	-	-	S3S4
Black-footed reindeer lichen	<i>Cladonia stygia</i>	-	-	-	S3?
American beech	<i>Fagus grandifolia</i>	-	-	-	S3S4

Common Name	Scientific Name	COSEWIC	SARA	ESA	S-Rank
Black ash	<i>Fraxinus nigra</i>	Threatened	-	Threatened	S2
Roughened shingle lichen	<i>Fuscopannaria ahlneri</i>	-	-	-	S3
a Lichen	<i>Fuscopannaria soledata</i>	-	-	-	S2S3
Northern comandra	<i>Geocaulon lividum</i>	-	-	-	S3S4
Fringe lichen	<i>Heterodermia neglecta</i>	-	-	-	S3S4
Powdered fringe lichen	<i>Heterodermia speciosa</i>	-	-	-	S3S4
Blistered jellyskin lichen	<i>Leptogium corticola</i>	-	-	-	S3S4
Southern twayblade	<i>Neottia bifolia</i>	-	-	-	S3
Naked kidney lichen	<i>Nephroma bellum</i>	-	-	-	S3
Blue felt lichen	<i>Pectenium plumbea</i>	Special Concern	Special Concern	Vulnerable	S3
Tree pelt lichen	<i>Peltigera collina</i>	-	-	-	S3
Eastern waterfan	<i>Peltigera hydrothyria</i>	Threatened	Threatened	Threatened	S1
Frosted glass-whiskers (atlantic population)	<i>Sclerophora peronella</i> (Atlantic pop.)	Special Concern	Special Concern	-	S3S4
Appressed jellyskin lichen	<i>Scytinium subtile</i>	-	-	-	S3S4
Wild celery	<i>Vallisneria americana</i>	-	-	-	S2S3

APPENDIX L

TERRESTRIAL FAUNA PHOTO LOG



Photo 1: White-tailed deer (*Odocoileus virginianus*) photographed by trail camera 55 in the Study Area.

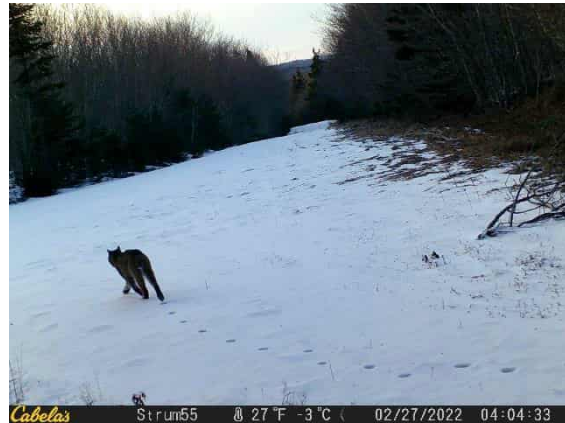


Photo 2: Bobcat (*Lynx rufus*) photographed by trail camera 55 in the Study Area.



Photo 3: Eastern coyote (*Canis latrans*) photographed by trail camera 55 in the Study Area.



Photo 4: Eastern coyote photographed by trail camera 71 in the Study Area.



Photo 5: Bobcat photographed by trail camera 71 in the Study Area.



Photo 6: American black bear (*Ursus americanus*) photographed by trail camera 71 in the Study Area.



Photo 7: White-tailed deer photographed by trail camera 74 in the Study Area.



Photo 8: Eastern coyote photographed by trail camera 74 located in the Study Area



Photo 9: White-tailed deer photographed by trail camera 74 in the Study Area.



Photo 10: North American porcupine (*Erethizon dorsatum*) photographed by trail camera 74 in the Study Area.



Photo 11: Signs of bobcat photographed on February 26, 2026, during winter tracking surveys.



Photo 12: White-tailed deer tracks photographed on March 12, 2023, during winter tracking surveys.



Photo 13: Snowshoe hare (*Lepus americanus*) tracks photographed on March 8, 2023, during winter tracking surveys.



Photo 14: Bobcat tracks photographed on March 13, 2023, during winter tracking surveys.



Photo 15: North American beaver (*Castor canadensis*) signs photographed on February 17, 2026, during winter tracking surveys.



Photo 16: Suspected fisher tracks (*Pekania pennanti*) photographed on February 16, 2023.



Photo 17: White-tailed deer scat photographed on May 9, 2025, during pellet group inventory surveys.



Photo 18: Eastern coyote scat photographed on May 8, 2025, during pellet group inventory surveys.



Photo 19: North American porcupine signs photographed on February 27, 2025.



Photo 20: American black bear photographed on June 10, 2025, incidental encounter.



Photo 21: Snapping turtle (*Chelydra serpentina*) photographed on road near the Study Area on June 18, 2025.



Photo 22: Snapping turtle nesting signs photographed on road near the Study Area on June 18, 2025.



Photo 23: Snapping turtle photographed on May 28, 2025, on roadside.



Photo 24: Suitabie wood turtle (*Glyptemys insculpta*) nesting habitat at WCT-15 photographed on May 14, 2025, during wood turtle surveys.



Photo 25: Suitable wood turtle general habitat at WCT-17 photographed on May 14, 2025, during wood turtle surveys.



Photo 26: Suitable wood turtle overwintering habitat at WCT-17 photographed on May 14, 2025, during wood turtle surveys.



Photo 27: Suitable wood turtle general habitat at WCT-19 photographed on May 12, 2025, during wood turtle surveys.



Photo 28: Suitable wood turtle nesting habitat at WCT-21 photographed on May 13, 2025, during wood turtle surveys.

APPENDIX M

AVIFAUNA

Table 1: 2023 Point Count Location Habitat Descriptions - Harbour Hills Wind Project

Project # 25-11682

Survey Location	Habitat
evw 14	Mid aged coniferous forest
evw 105	Mid age mature mixed wood forest
evw 106	Mid age conifers, some cutting during survey period
evw 107	Mid aged/mature coniferous forest
evw 108	Mature deciduous forest, young mixed woods along road edge
evw 109	Mature deciduous forest
evw 110	Mid aged coniferous forest
evw 111	Mid aged coniferous forest, coniferous swamp
evw 112	Mid aged scrubby coniferous forest
evw 113	Mid aged /maturen coniferous forest
evw 114	Young mixedwood regen, scattered various aged mixed woods, distant conifer swamp
evw 115	Mid aged coniferous forest, small coniferous bog
evw 116	Various aged mixed woods
evw 117	Mixedwood forest with large wetland complex to the north
evw 118	Mid aged coniferous forest
evw 119	Mid aged/mature coniferous forest
evw 120	Mature softwood stand along brook, mature hardwoods in nearby
evw 121	Mature hardwoods
evw 122	Young deciduous forest, scattered older trees
evw 123	Mid aged mixed woods near new cut
evw 124	Coniferous swamp near new cut
evw 125	Young mixed regen surrounded by mixed woods of various age
evw 126	Young/medium aged conifer
evw 127	Mature deciduous forest
evw 128	Mid aged coniferous forest near brook
evw 130	Small cut surrounded by mid aged/mature conifers
evw 131	Mid aged conifer/mixed woods near brook
evw 132	Young conifer/mixed woods
evw 133	Mid aged/mature conifers along brook
evw 134	Mid aged/mature conifer/mixed woods
evw 135	Mid aged conifer
evw 136	Spruce bog, mid aged/mature conifers
evw 137	Mid aged conifers, some recent cutting
evw 138	Mid aged conifers/tamarack, small coniferous bog
evw 139	Mid aged scrubby conifers
evw 140	Mid aged/mature scrubby conifer, conifer swamp
evw 141	Mid aged coniferous forest
evw 142	Mid aged/mature scrubby conifers
evw 143	Mid aged/mature hardwood/mixedwood forest
evw 144	Mid aged conifers/tamarack
evw 145	Mid aged mixed woods, some old deciduous trees
evw146	Mid aged/mature conifer/mixed woods, brook

Table 1: 2023 Point Count Location Habitat Descriptions - Harbour Hills Wind Project

Project # 25-11682

Survey Location	Habitat
evw 147	Mid aged mixed woods
evw 148	Mid aged conifers
evw 149	Mid aged conifers
evw 150	Mid aged/mature conifers
evw 151	Young/mid aged mixed woods
evw152	Young conifers, scattered scrubby mature conifers
evw 153	Various aged conifers
evw 154	Mature conifers/mixed woods
evw 155	Various aged mixed woods
evw 156	Large cut, various aged conifer, black spruce bog
evw 157	Young conifers
evw 158	Mature conifers
evw 159	Young/medium aged conifers, looks pre thinned
evw 160	Mid aged/mature conifers/mixed woods
evw 161	Young conifers/mixed woods
evw 162	Young conifers/tamarack
evw 163	Mid aged/mature swampy spruce/tamarack
evw 164	Coniferous swamp, mid sized trees
evw 167	Mid aged conifers/mixed woods
evw 168	Young conifers
evw 169	Mid aged/mature upland conifers
evw170	Mid aged/mature upland conifer, mostly fir
evw 171	Mid aged conifer/mixed woods
evw 172	Mature balsam fir, small coniferous swamp
evw 173	Mid aged/mature conifers
evw 174	Mid aged/mature conifers
evw 175	Scrubby mixed woods (black spruce, tamarack, fir, grey/paper birch)
evw 176	Large open bog, scrubby mixed woods along road edge
evw 177	Mid aged scrubby conifers
evw 187	Mature conifers
evw 190	Young conifers, thinned
evw 195	Small coniferous swamp, mid aged/mature conifer

Table 2: 2023 Winter Bird Point Count Survey Results - Harbour Hills Wind Project

Project # 25-11682

Observer	Date	Survey Location	Survey Start Time	Species Code	Common Name	Scientific Name	#	Behaviour	Distance (m)	Bearing	Incidental?	Pass Height (m)	Pass Direction	Comments
Chris Pepper	1-Feb-23	evw 187	11:26 AM	CORA	Common Raven	<i>Corvus corax</i>	2	Calling						
Chris Pepper	2-Feb-23	evw 132	7:39 AM	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	Calling	50					Indian River Road
Chris Pepper	2-Feb-23	evw 132		N/A	Woodpecker Sp.	N/A	2	Drumming	100					
Chris Pepper	2-Feb-23	evw 131(moved)	7:54 AM	CORA	Common Raven	<i>Corvus corax</i>	1	Calling	1000					Moved 800 m east due to fallen tree
Chris Pepper	2-Feb-23	evw 131(moved)		N/A	Woodpecker Sp.	N/A	2	Calling	100					
Chris Pepper	2-Feb-23	evw 130	8:08 AM	CORA	Common Raven	<i>Corvus corax</i>	1	Calling	250					
Chris Pepper	2-Feb-23	evw 118	8:23 AM	N/A	Woodpecker Sp.	N/A	1	Drumming	50					
Chris Pepper	2-Feb-23	evw 118		BOCH	Boreal Chickadee	<i>Poecile hudsonicus</i>	3	Calling	0	N				
Chris Pepper	2-Feb-23	evw 118		BCCH	Black-capped Chickadee	<i>Poecile atricapillus</i>	1	Calling	0					
Chris Pepper	2-Feb-23	evw 117	8:39 AM	CORA	Common Raven	<i>Corvus corax</i>	1	Calling	500					
Chris Pepper	2-Feb-23	evw 119	8:57 AM	N/A	Woodpecker Sp.	N/A	3	Drumming	100					
Chris Pepper	2-Feb-23	evw 121	9:29 AM	N/A	Woodpecker Sp.	N/A	1	Drumming	100					
Chris Pepper	2-Feb-23	evw 121		CORA	Common Raven	<i>Corvus corax</i>	1	Calling	500	NW		-50	NW	
Chris Pepper	2-Feb-23	evw 121		BCCH	Black-capped Chickadee	<i>Poecile atricapillus</i>	1	Calling	100					
Chris Pepper	2-Feb-23	evw 121		HAWO	Hairy Woodpecker	<i>Dryobates villosus</i>	1	Foraging	0					
Chris Pepper	2-Feb-23	evw 122	9:52 AM	CORA	Common Raven	<i>Corvus corax</i>	1	Calling	1000					
Chris Pepper	2-Feb-23	evw 120	10:06 AM	HAWO	Hairy Woodpecker	<i>Dryobates villosus</i>	1	Foraging	0					
Chris Pepper	2-Feb-23	evw 120		GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	Calling	0					
Chris Pepper	2-Feb-23	evw 120		BCCH	Black-capped Chickadee	<i>Poecile atricapillus</i>	2	Calling	100					
Chris Pepper	2-Feb-23	evw 123	10:28 AM	N/A	N/A	N/A	0	N/A						No birds observed
Chris Pepper	2-Feb-23	evw 124	10:41 AM	CORA	Common Raven	<i>Corvus corax</i>	2	Passing	0	NW		-50	SE	
Chris Pepper	2-Feb-23	evw 127	10:55 AM	N/A	Woodpecker Sp.	N/A	1	Drumming	100					
Chris Pepper	2-Feb-23	evw 125	11:18 AM	CORA	Common Raven	<i>Corvus corax</i>	1	Calling	1000					
Chris Pepper	2-Feb-23	evw 126	11:33 AM	CORA	Common Raven	<i>Corvus corax</i>	2	Calling	500					
Chris Pepper	6-Feb-23	evw 173	7:44 AM	BCCH	Black-capped Chickadee	<i>Poecile atricapillus</i>	4	Calling	0					Port Bickerton
Chris Pepper	6-Feb-23	evw 173		NOGO	American Goshawk	<i>Astur atricapillus</i>	1	Passing	0	SW		-50	NE	
Chris Pepper	6-Feb-23	evw 175	8:16 AM	BCCH	Black-capped Chickadee	<i>Poecile atricapillus</i>	2	Calling	50					
Chris Pepper	6-Feb-23	evw 175		BOCH	Boreal Chickadee	<i>Poecile hudsonicus</i>	3	Calling	0	S				
Chris Pepper	6-Feb-23	evw 176	8:34 AM	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	2	Calling	0					
Chris Pepper	6-Feb-23	evw 177	8:51 AM	BCCH	Black-capped Chickadee	<i>Poecile atricapillus</i>	3	Calling	0					
Chris Pepper	6-Feb-23	evw 177		GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	2	Calling	0					
Chris Pepper	6-Feb-23	evw 174	9:07 AM	BOCH	Boreal Chickadee	<i>Poecile hudsonicus</i>	3	Calling	0	NE				
Chris Pepper	6-Feb-23	evw 174		BCCH	Black-capped Chickadee	<i>Poecile atricapillus</i>	2	Calling	0					
Chris Pepper	6-Feb-23	evw 174		RBNU	Red-breasted Nuthatch	<i>Sitta canadensis</i>	1	Calling	0	NE				
Chris Pepper	6-Feb-23	evw 187(new)	9:47 AM	N/A	N/A	N/A	0	N/A						No birds observed
Chris Pepper	6-Feb-23	evw 164	10:05 AM	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	2	Calling	0					
Chris Pepper	6-Feb-23	evw 164		AMCR	American Crow	<i>Corvus brachyrhynchos</i>	1	Calling	500					
Chris Pepper	6-Feb-23	evw 167	10:21 AM	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	3	Calling	0					
Chris Pepper	6-Feb-23	evw 167		CORA	Common Raven	<i>Corvus corax</i>	1	Calling	1000					
Chris Pepper	6-Feb-23	evw 168	10:36 AM	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	2	Calling	0					
Chris Pepper	6-Feb-23	evw 168		HAWO	Hairy Woodpecker	<i>Dryobates villosus</i>	1	Calling			Yes			
Chris Pepper	6-Feb-23	evw 168		DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1	Flushed			Yes			
Chris Pepper	6-Feb-23	evw 169	11:11 AM	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	Singing	50					
Chris Pepper	6-Feb-23	evw 170	11:30 AM	BOCH	Boreal Chickadee	<i>Poecile hudsonicus</i>	2	Calling	0	NW				
Chris Pepper	6-Feb-23	evw 172	11:45 AM	CORA	Common Raven	<i>Corvus corax</i>	1	Calling	1000					
Chris Pepper	6-Feb-23	evw 171	12:05 PM	CORA	Common Raven	<i>Corvus corax</i>	1	Calling	500					
Chris Pepper	6-Feb-23	evw 171		GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	Calling						
Chris Pepper	6-Feb-23	evw 171		BOCH	Boreal Chickadee	<i>Poecile hudsonicus</i>	3	Calling	0	N				
Chris Pepper	6-Feb-23	evw 195(new)	12:18 PM	N/A	N/A	N/A	0	N/A						No birds observed
Chris Pepper	9-Feb-23	evw 133	7:45 AM	BCCH	Black-capped Chickadee	<i>Poecile atricapillus</i>	2	Calling	0					Indian River Road
Chris Pepper	9-Feb-23	evw 135	7:58 AM	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	Calling	0					
Chris Pepper	9-Feb-23	evw 134	8:12 AM	N/A	N/A	N/A	0	N/A						No birds observed
Chris Pepper	9-Feb-23	evw 143	8:30 AM	BCCH	Black-capped Chickadee	<i>Poecile atricapillus</i>	1	Calling	0					
Chris Pepper	9-Feb-23	evw 143		CORA	Common Raven	<i>Corvus corax</i>	1	Calling	1000					
Chris Pepper	9-Feb-23	evw 144	8:44 AM	N/A	N/A	N/A	0	N/A						No birds observed
Chris Pepper	9-Feb-23	evwc145	9:10 AM	N/A	N/A	N/A	0	N/A						No birds observed
Chris Pepper	9-Feb-23	evw 149	9:28 AM	RUGR	Ruffed Grouse	<i>Bonasa umbellus</i>	1	Flushed			Yes			
Chris Pepper	9-Feb-23	evw 148	9:43 AM	N/A	N/A	N/A	0	N/A						No birds observed
Chris Pepper	9-Feb-23	evw 146	9:59 AM	N/A	N/A	N/A	0	N/A						No birds observed
Chris Pepper	9-Feb-23	evw 147	10:14 AM	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	2	Calling	0					
Chris Pepper	9-Feb-23	evw 151	10:36 AM	N/A	N/A	N/A	0	N/A						No birds observed
Chris Pepper	9-Feb-23	evw 150	10:53 AM	N/A	N/A	N/A	0	N/A						No birds observed
Chris Pepper	9-Feb-23	evw 139	11:09 AM	N/A	N/A	N/A	0	N/A						No birds observed
Chris Pepper	9-Feb-23	evw 140	11:22 AM	N/A	N/A	N/A	0	N/A						No birds observed

Table 2: 2023 Winter Bird Point Count Survey Results - Harbour Hills Wind Project

Project # 25-11682

Observer	Date	Survey Location	Survey Start Time	Species Code	Common Name	Scientific Name	#	Behaviour	Distance (m)	Bearing	Incidental?	Pass Height (m)	Pass Direction	Comments
Chris Pepper	9-Feb-23	evw 142	11:39 AM	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1	Flushed	0					
Chris Pepper	9-Feb-23	evw 152	11:55 AM	N/A	N/A	N/A	0	N/A						No birds observed
Chris Pepper	9-Feb-23	evw 141	12:12 PM	N/A	N/A	N/A	0	N/A						No birds observed
Chris Pepper	11-Feb-23	evw 153(moved)	8:26 AM	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	1	Calling			Yes			Country Harbour
Chris Pepper	11-Feb-23	evw 189	8:42 AM	N/A	N/A	N/A	0	N/A						No birds observed
Chris Pepper	11-Feb-23	evw 156	8:56 AM	N/A	N/A	N/A	0	N/A						No birds observed
Chris Pepper	11-Feb-23	evw 155	9:12 AM	N/A	N/A	N/A	0	N/A						No birds observed
Chris Pepper	11-Feb-23	evw 154	9:28 AM	CORA	Common Raven	<i>Corvus corax</i>	1	Calling	250					
Chris Pepper	11-Feb-23	evw 154		CANG	Canada Goose	<i>Branta canadensis</i>	2	Calling	250					
Chris Pepper	11-Feb-23	evw 161	9:59 AM	N/A	N/A	N/A	0	N/A						No birds observed
Chris Pepper	11-Feb-23	evw 163	10:26 AM	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1	Flushed	0					
Chris Pepper	11-Feb-23	evw 162	10:45 AM	BOCH	Boreal Chickadee	<i>Poecile hudsonicus</i>	3	Calling	0	NE				
Chris Pepper	11-Feb-23	evw 162		BCCH	Black-capped Chickadee	<i>Poecile atricapillus</i>	2	Calling	0					
Chris Pepper	11-Feb-23	evw 162		GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	2	Calling	0					
Chris Pepper	11-Feb-23	evw 160	11:01 AM	N/A	N/A	N/A	0	N/A						No birds observed
Chris Pepper	11-Feb-23	evw 159	11:15 AM	N/A	N/A	N/A	0	N/A						No birds observed
Chris Pepper	11-Feb-23	evw 158	11:31 AM	N/A	N/A	N/A	0	N/A						No birds observed
Chris Pepper	12-Feb-23	evw 105	7:44 AM	PIWO	Pileated Woodpecker	<i>Dryocopus pileatus</i>	1	Calling	100					Indian River Road
Chris Pepper	12-Feb-23	evw 105		GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	3	Calling	0					
Chris Pepper	12-Feb-23	evw 105		BCCH	Black-capped Chickadee	<i>Poecile atricapillus</i>	1	Calling	50					
Chris Pepper	12-Feb-23	evw 105		N/A	Woodpecker Sp.	N/A	1	Drumming	100					
Chris Pepper	12-Feb-23	evw 106	7:58 AM	N/A	N/A	N/A	0	N/A						No birds observed
Chris Pepper	12-Feb-23	evw 107	8:21 AM	N/A	Woodpecker Sp.	N/A	2	Drumming	250					
Chris Pepper	12-Feb-23	evw 110	8:39 AM	BOCH	Boreal Chickadee	<i>Poecile hudsonicus</i>	4	Calling	0	SW				
Chris Pepper	12-Feb-23	evw 111	8:58 AM	N/A	Woodpecker Sp.	N/A	1	Drumming	100					
Chris Pepper	12-Feb-23	evw 111		BCCH	Black-capped Chickadee	<i>Poecile atricapillus</i>	2	Calling	50					
Chris Pepper	12-Feb-23	evw 112	9:17 AM	N/A	Woodpecker Sp.	N/A	1	Passing	100	NE		-50	S	
Chris Pepper	12-Feb-23	evw 112		CORA	Common Raven	<i>Corvus corax</i>	2	Passing	100	NE		-50	S	
Chris Pepper	12-Feb-23	evw 113	9:41 AM	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	Calling	0					
Chris Pepper	12-Feb-23	evw 114	10:03 AM	BCCH	Black-capped Chickadee	<i>Poecile atricapillus</i>	3	Calling	50					
Chris Pepper	12-Feb-23	evw 115	10:18 AM	BCCH	Black-capped Chickadee	<i>Poecile atricapillus</i>	2	Calling	0					
Chris Pepper	12-Feb-23	evw 115		BOCH	Boreal Chickadee	<i>Poecile hudsonicus</i>	1	Calling	0	NW				
Chris Pepper	12-Feb-23	evw 116	10:36 AM	PIWO	Pileated Woodpecker	<i>Dryocopus pileatus</i>	1	Calling	100					
Chris Pepper	12-Feb-23	evw 190	10:53 AM	BCCH	Black-capped Chickadee	<i>Poecile atricapillus</i>	2	Calling	0					
Chris Pepper	12-Feb-23	evw 190		GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	2	Calling	0					
Chris Pepper	12-Feb-23	evw 108	11:24 AM	N/A	N/A	N/A	0	N/A						No birds observed
Chris Pepper	12-Feb-23	evw 109	11:45 AM	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	Calling	500					
Chris Pepper	21-Feb-23	evw 117	7:15 AM	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	Calling	0					Indian River Road
Chris Pepper	21-Feb-23	evw 118	7:28 AM	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	2	Calling	0					
Chris Pepper	21-Feb-23	evw 130	7:43 AM	N/A	N/A	N/A	0	N/A						Lots of water noise, no birds observed
Chris Pepper	21-Feb-23	evw 133	7:58 AM	N/A	N/A	N/A	0	N/A						No birds observed
Chris Pepper	21-Feb-23	evw 132	8:11 AM	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	2	Calling	0					
Chris Pepper	21-Feb-23	evw 132		HAWO	Hairy Woodpecker	<i>Dryobates villosus</i>	1	Calling	0					
Chris Pepper	21-Feb-23	evw 132		CORA	Common Raven	<i>Corvus corax</i>	1	Calling	250					
Chris Pepper	21-Feb-23	evw 132		BCCH	Black-capped Chickadee	<i>Poecile atricapillus</i>	2	Singing	50					
Chris Pepper	21-Feb-23	evw 130	8:29 AM	BOCH	Boreal Chickadee	<i>Poecile hudsonicus</i>	2	Calling	0	NE				
Chris Pepper	21-Feb-23	evw 130		RECR	Red Crossbill	<i>Loxia curvirostra</i>	1	Singing	50	SW				
Chris Pepper	21-Feb-23	evw 123	8:48 AM	BOCH	Boreal Chickadee	<i>Poecile hudsonicus</i>	2	Calling	0					
Chris Pepper	21-Feb-23	evw 123		GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	2	Calling	0	N				
Chris Pepper	21-Feb-23	evw 123		BCCH	Black-capped Chickadee	<i>Poecile atricapillus</i>	2	Calling	0					
Chris Pepper	21-Feb-23	evw 124	9:04 AM	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	2	Calling	100					
Chris Pepper	21-Feb-23	evw 127	9:27 AM	PIWO	Pileated Woodpecker	<i>Dryocopus pileatus</i>	3	Calling	50					
Chris Pepper	21-Feb-23	evw 125	9:46 AM	N/A	N/A	N/A	0	N/A						No birds observed
Chris Pepper	21-Feb-23	evw 126	10:00 AM	N/A	N/A	N/A	0	N/A						No birds observed
Chris Pepper	21-Feb-23	evw 119	10:36 AM	N/A	N/A	N/A	0	N/A						No birds observed
Chris Pepper	21-Feb-23	evw 120	10:51 AM	CORA	Common Raven	<i>Corvus corax</i>	1	Calling	1000					
Chris Pepper	21-Feb-23	evw 122	11:04 AM	PIWO	Pileated Woodpecker	<i>Dryocopus pileatus</i>	1	Drumming	250					
Chris Pepper	21-Feb-23	evw 122		GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	2	Calling	0					
Chris Pepper	21-Feb-23	evw 121	11:19 AM	BRCR	Brown Creeper	<i>Certhia americana</i>	2	Calling	0					
Chris Pepper	21-Feb-23	evw 134	11:48 AM	GRAJ	Canada Jay	<i>Perisoreus canadensis</i>	1	Foraging						
Chris Pepper	21-Feb-23	evw 134		GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	Singing	0					
Chris Pepper	21-Feb-23	evw 134		BOCH	Boreal Chickadee	<i>Poecile hudsonicus</i>	2	Soaring	0	W				
Chris Pepper	21-Feb-23	evw 134		BCCH	Black-capped Chickadee	<i>Poecile atricapillus</i>	1	Singing	0					

Table 2: 2023 Winter Bird Point Count Survey Results - Harbour Hills Wind Project

Project # 25-11682

Observer	Date	Survey Location	Survey Start Time	Species Code	Common Name	Scientific Name	#	Behaviour	Distance (m)	Bearing	Incidental?	Pass Height (m)	Pass Direction	Comments
Chris Pepper	21-Feb-23	evw 134		CORA	Common Raven	<i>Corvus corax</i>	1	Calling	1000					
Chris Pepper	6-Mar-23	evw 135	7:01 AM	HAWO	Hairy Woodpecker	<i>Dryobates villosus</i>	1	Calling	50					
Chris Pepper	6-Mar-23	evw 136	7:17 AM	RUGR	Ruffed Grouse	<i>Bonasa umbellus</i>	1	Flushed	0					
Chris Pepper	6-Mar-23	evw 143	7:30 AM	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	Calling	50					
Chris Pepper	6-Mar-23	evw 143		BCCH	Black-capped Chickadee	<i>Poecile atricapillus</i>	2	Calling	50					
Chris Pepper	6-Mar-23	evw 144	7:45 AM	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	2	Calling	0					
Chris Pepper	6-Mar-23	evw 146	8:01 AM	N/A	N/A	N/A	0	N/A						No birds observed
Chris Pepper	6-Mar-23	evw 147	8:22 AM	N/A	N/A	N/A	0	N/A						No birds observed
Chris Pepper	6-Mar-23	evw 148	8:49 AM	BOCH	Boreal Chickadee	<i>Poecile hudsonicus</i>	2	Calling	0	NE				
Chris Pepper	6-Mar-23	evw 149	9:04 AM	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	2	Calling	0					
Chris Pepper	6-Mar-23	evw 149		RUGR	Ruffed Grouse	<i>Bonasa umbellus</i>	1	Flushed			Yes			
Chris Pepper	6-Mar-23	evw 145	9:26 AM	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	2	Calling	0					
Chris Pepper	6-Mar-23	evw 145		CORA	Common Raven	<i>Corvus corax</i>	1	Calling	1000					
Chris Pepper	6-Mar-23	evw 145		RUGR	Ruffed Grouse	<i>Bonasa umbellus</i>	1	Flushed	0					
Chris Pepper	6-Mar-23	evw 150	9:42 AM	CORA	Common Raven	<i>Corvus corax</i>	1	Calling	1000					
Chris Pepper	6-Mar-23	evw 151	9:58 AM	N/A	Woodpecker Sp.	N/A	1	Drumming	100					
Chris Pepper	6-Mar-23	evw 137	10:18 AM	N/A	N/A	N/A	0	N/A						No birds observed
Chris Pepper	6-Mar-23	evw 138	10:32 AM	N/A	N/A	N/A	0	N/A						No birds observed
Chris Pepper	6-Mar-23	evw 139	10:50 AM	N/A	N/A	N/A	0	N/A						No birds observed
Chris Pepper	6-Mar-23	evw 140	11:05 AM	GRAJ	Canada Jay	<i>Perisoreus canadensis</i>	2	Foraging	50	W				
Chris Pepper	6-Mar-23	evw 140		GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	2	Calling	0					
Chris Pepper	7-Mar-23	evw 161	7:29 AM	DOWO	Downy Woodpecker	<i>Dryobates pubescens</i>	1	Drumming	0					
Chris Pepper	7-Mar-23	evw 161		BLJA	Blue Jay	<i>Cyanocitta cristata</i>	1	Calling	50					
Chris Pepper	7-Mar-23	evw 162	7:48 AM	BCCH	Black-capped Chickadee	<i>Poecile atricapillus</i>	1	Singing	100					
Chris Pepper	7-Mar-23	evw 163	8:06 AM	CORA	Common Raven	<i>Corvus corax</i>	1	Calling	1000					
Chris Pepper	7-Mar-23	evw 163		BCCH	Black-capped Chickadee	<i>Poecile atricapillus</i>	3	Calling	0					
Chris Pepper	7-Mar-23	evw 160	8:23 AM	CORA	Common Raven	<i>Corvus corax</i>	1	Calling	500					
Chris Pepper	7-Mar-23	evw 159	8:37 AM	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	2	Calling	0					
Chris Pepper	7-Mar-23	evw 159		CORA	Common Raven	<i>Corvus corax</i>	2	Calling	500					
Chris Pepper	7-Mar-23	evw 158	8:53 AM	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	2	Calling	100					
Chris Pepper	7-Mar-23	evw 158		GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	2	Calling	0					
Chris Pepper	7-Mar-23	evw 154	9:18 AM	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	2	Calling	250					
Chris Pepper	7-Mar-23	evw 155	9:42 AM	CORA	Common Raven	<i>Corvus corax</i>	1	Calling	1000					
Chris Pepper	7-Mar-23	evw 155		AMCR	American Crow	<i>Corvus brachyrhynchos</i>	1	Calling	500					
Chris Pepper	7-Mar-23	evw 155		BCCH	Black-capped Chickadee	<i>Poecile atricapillus</i>	2	Calling	100					
Chris Pepper	7-Mar-23	evw 156	9:57 AM	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	Calling	50					
Chris Pepper	7-Mar-23	evw 189	10:11 AM	PIWO	Pileated Woodpecker	<i>Dryocopus pileatus</i>	1	Drumming	100					
Chris Pepper	7-Mar-23	evw 189		CORA	Common Raven	<i>Corvus corax</i>	1	Calling	1000					
Chris Pepper	7-Mar-23	evw 189		BCCH	Black-capped Chickadee	<i>Poecile atricapillus</i>	2	Calling	50					Waypoint changed 300 m north, consistent throughout surveys
Chris Pepper	7-Mar-23	evw 153	10:40 AM	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	Calling	0					
Chris Pepper	7-Mar-23	evw 153		BCCH	Black-capped Chickadee	<i>Poecile atricapillus</i>	2	Calling	50					
Chris Pepper	7-Mar-23	evw 157	10:58 AM	BOCH	Boreal Chickadee	<i>Poecile hudsonicus</i>	2	Calling	0	SW				
Chris Pepper	7-Mar-23	evw 157		BCCH	Black-capped Chickadee	<i>Poecile atricapillus</i>	2	Calling	50					
Chris Pepper	7-Mar-23	evw 157		CORA	Common Raven	<i>Corvus corax</i>	1	Calling	1000					
Chris Pepper	10-Mar-23	evw 174	6:39 AM	N/A	N/A	N/A	0	N/A						No birds observed
Chris Pepper	10-Mar-23	evw 173	6:58 AM	HAWO	Hairy Woodpecker	<i>Dryobates villosus</i>	1	Calling	100					
Chris Pepper	10-Mar-23	evw 175	7:18 AM	CORA	Common Raven	<i>Corvus corax</i>	1	Calling	1000					
Chris Pepper	10-Mar-23	evw 175		BCCH	Black-capped Chickadee	<i>Poecile atricapillus</i>	2	Calling	0					
Chris Pepper	10-Mar-23	evw 176	7:33 AM	SPGR	Spruce Grouse	<i>Canachites canadensis</i>	1	Foraging	100					
Chris Pepper	10-Mar-23	evw 176		BCCH	Black-capped Chickadee	<i>Poecile atricapillus</i>	2	Calling	0					
Chris Pepper	10-Mar-23	evw 177	7:49 AM	BOCH	Boreal Chickadee	<i>Poecile hudsonicus</i>	2	Calling	0	W				
Chris Pepper	10-Mar-23	evw 177		BCCH	Black-capped Chickadee	<i>Poecile atricapillus</i>	2	Calling	0					
Chris Pepper	10-Mar-23	evw 177		CORA	Common Raven	<i>Corvus corax</i>	1	Calling	500					
Chris Pepper	10-Mar-23	evw 177		AMCR	American Crow	<i>Corvus brachyrhynchos</i>	2	Calling	100					
Chris Pepper	10-Mar-23	evw 187	8:30 AM	N/A	N/A	N/A	0	N/A						No birds observed
Chris Pepper	10-Mar-23	evw 164	8:48 AM	BCCH	Black-capped Chickadee	<i>Poecile atricapillus</i>	2	Calling	0					
Chris Pepper	10-Mar-23	evw 168	9:04 AM	AMGO	American Goldfinch	<i>Spinus tristis</i>	1	Flushed	0					Flushed from alders beside road 100 m from waypoint
Chris Pepper	10-Mar-23	evw 168		N/A	Woodpecker Sp.	N/A	2	Calling	0					
Chris Pepper	10-Mar-23	evw 168		DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1	Flushed	0					Flushed from road
Chris Pepper	10-Mar-23	evw 167	9:20 AM	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	Calling	0					
Chris Pepper	10-Mar-23	evw 169	10:03 AM	N/A	N/A	N/A	0	N/A						No birds observed
Chris Pepper	10-Mar-23	evw 171	10:32 AM	CORA	Common Raven	<i>Corvus corax</i>	1	Calling	500					On road between waypoints

Table 2: 2023 Winter Bird Point Count Survey Results - Harbour Hills Wind Project

Observer	Date	Survey Location	Survey Start Time	Species Code	Common Name	Scientific Name	#	Behaviour	Distance (m)	Bearing	Incidental?	Pass Height (m)	Pass Direction	Comments
Chris Pepper	10-Mar-23	evw 171		GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	Calling	0					
Chris Pepper	10-Mar-23	evw 195	10:49 AM	CORA	Common Raven	<i>Corvus corax</i>	1	Calling	1000					
Chris Pepper	10-Mar-23	evw 195		GRAJ	Canada Jay	<i>Perisoreus canadensis</i>	1	Passing	0	NE		-50	SW	
Chris Pepper	10-Mar-23	evw 170	11:02 AM	N/A	N/A	N/A	0	N/A						No birds observed
Chris Pepper	10-Mar-23	evw 172	11:18 AM	N/A	Woodpecker Sp.	N/A	1	Drumming	100					
Chris Pepper	11-Mar-23	evw 187	7:55 AM	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	Calling	0					
Chris Pepper	16-Mar-23	evw 117	7:36 AM	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	1	Calling	100					Indian River Road
Chris Pepper	16-Mar-23	evw 118	7:52 AM	N/A	N/A	N/A	0	N/A						No birds observed
Chris Pepper	16-Mar-23	evw 123	8:11 AM	BOCH	Boreal Chickadee	<i>Poecile hudsonicus</i>	2	Calling	0	NW				
Chris Pepper	16-Mar-23	evw 123		GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	Calling	0					
Chris Pepper	16-Mar-23	evw 125	8:37 AM	N/A	N/A	N/A	0	N/A						No birds observed
Chris Pepper	16-Mar-23	evw 126	8:52 AM	N/A	N/A	N/A	0	N/A						No birds observed
Chris Pepper	16-Mar-23	evw 128	9:19 AM	N/A	N/A	N/A	0	N/A						No birds observed
Chris Pepper	16-Mar-23	evw 127	9:34 AM	N/A	N/A	N/A	0	N/A						No birds observed
Chris Pepper	16-Mar-23	evw 124	9:49 AM	BOCH	Boreal Chickadee	<i>Poecile hudsonicus</i>	1	Calling	0	SW				
Chris Pepper	16-Mar-23	evw 124		GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	Calling	0					
Chris Pepper	16-Mar-23	evw 124		CANG	Canada Goose	<i>Branta canadensis</i>	2	Passing	100	W		-50	N	
Chris Pepper	16-Mar-23	evw 130	10:06 AM	N/A	N/A	N/A	0	N/A						No birds observed
Chris Pepper	16-Mar-23	evw 131	10:27 AM	DOWO	Downy Woodpecker	<i>Dryobates pubescens</i>	1	Foraging	50					
Chris Pepper	16-Mar-23	evw 134	10:50 AM	N/A	N/A	N/A	0	N/A						No birds observed
Chris Pepper	16-Mar-23	evw 119	11:17 AM	N/A	N/A	N/A	0	N/A						No birds observed
Chris Pepper	16-Mar-23	evw 120	11:31 AM	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	1	Calling	50					
Chris Pepper	16-Mar-23	evw 122	11:46 AM	BCCH	Black-capped Chickadee	<i>Poecile atricapillus</i>	3	-						
Chris Pepper	16-Mar-23	evw 122		HERG	Herring Gull	<i>Larus argentatus</i>	6	Passing	0	SW		-50	N	
Chris Pepper	16-Mar-23	evw 121	12:02 PM	N/A	N/A	N/A	0	N/A						No birds observed
Chris Pepper	19-Mar-23	evw 132	7:20 AM	BCCH	Black-capped Chickadee	<i>Poecile atricapillus</i>	2	Singing	50					Indian River Road
Chris Pepper	19-Mar-23	evw 132		PIWO	Pileated Woodpecker	<i>Dryocopus pileatus</i>	1	Calling	100					
Chris Pepper	19-Mar-23	evw 132		GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	Calling	0					
Chris Pepper	19-Mar-23	evw 132		CORA	Common Raven	<i>Corvus corax</i>	1	Calling	500					
Chris Pepper	19-Mar-23	evw 132		GRAJ	Canada Jay	<i>Perisoreus canadensis</i>	1	Perched	100					Sitting silently on tree top, stayed for several minutes
Chris Pepper	19-Mar-23	evw 133	7:38 AM	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	Calling	0					Brook noisy, hard to hear distant birds
Chris Pepper	19-Mar-23	evw 133		BCCH	Black-capped Chickadee	<i>Poecile atricapillus</i>	2	Singing	0					
Chris Pepper	19-Mar-23	evw 133		BOCH	Boreal Chickadee	<i>Poecile hudsonicus</i>	2	Calling	0	SE				
Chris Pepper	19-Mar-23	evw 135	7:51 AM	CORA	Common Raven	<i>Corvus corax</i>	2	Calling	500					
Chris Pepper	19-Mar-23	evw 135		BLJA	Blue Jay	<i>Cyanocitta cristata</i>	2	Calling	100					
Chris Pepper	19-Mar-23	evw 135		GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	Singing	0					
Chris Pepper	19-Mar-23	evw 143	8:08 AM	HAWO	Hairy Woodpecker	<i>Dryobates villosus</i>	1	Calling	100					
Chris Pepper	19-Mar-23	evw 150	8:23 AM	N/A	Woodpecker Sp.	N/A	1	Drumming	250					
Chris Pepper	19-Mar-23	evw 150		GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	2	Calling	0					
Chris Pepper	19-Mar-23	evw 150		CORA	Common Raven	<i>Corvus corax</i>	1	Calling	500					
Chris Pepper	19-Mar-23	evw 151	8:38 AM	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	2	Singing	50					
Chris Pepper	19-Mar-23	evw 151		AMCR	American Crow	<i>Corvus brachyrhynchos</i>	1	Calling	1000					
Chris Pepper	19-Mar-23	evw 144	9:07 AM	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	1	Calling	1000					
Chris Pepper	19-Mar-23	evw 145	9:22 AM	BCCH	Black-capped Chickadee	<i>Poecile atricapillus</i>	1	Singing	50					
Chris Pepper	19-Mar-23	evw 145		AMCR	American Crow	<i>Corvus brachyrhynchos</i>	2	Singing	500					
Chris Pepper	19-Mar-23	evw 145		DOWO	Downy Woodpecker	<i>Dryobates pubescens</i>	1	Calling	0					
Chris Pepper	19-Mar-23	evw 145		SPGR	Spruce Grouse	<i>Canachites canadensis</i>	1	Flushed			Yes			
Chris Pepper	19-Mar-23	evw 145		RUGR	Ruffed Grouse	<i>Bonasa umbellus</i>	1	Flushed			Yes			
Chris Pepper	19-Mar-23	evw 146	9:38 AM	BCCH	Black-capped Chickadee	<i>Poecile atricapillus</i>	2	Singing	100					
Chris Pepper	19-Mar-23	evw 146		GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	2	Singing	50					
Chris Pepper	19-Mar-23	evw 147	9:51 AM	N/A	N/A	N/A	0	N/A						No birds observed
Chris Pepper	19-Mar-23	evw 149	10:11 AM	N/A	N/A	N/A	0	N/A						No birds observed
Chris Pepper	19-Mar-23	evw 148	10:25 AM	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	2	Calling	0					
Chris Pepper	19-Mar-23	evw 136	10:42 AM	BOCH	Boreal Chickadee	<i>Poecile hudsonicus</i>	4	Calling	100	SW				
Chris Pepper	19-Mar-23	evw 136		GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	2	Calling	0					
Chris Pepper	19-Mar-23	evw 136		BLJA	Blue Jay	<i>Cyanocitta cristata</i>	1	Calling	100					
Chris Pepper	19-Mar-23	evw 137	10:55 AM	N/A	N/A	N/A	0	N/A						No birds observed
Chris Pepper	19-Mar-23	evw 138	11:08 AM	N/A	N/A	N/A	0	N/A						No birds observed
Chris Pepper	19-Mar-23	evw 139	11:24 AM	CORA	Common Raven	<i>Corvus corax</i>	1	Calling	500					
Chris Pepper	19-Mar-23	evw 140	11:38 AM	SPGR	Spruce Grouse	<i>Canachites canadensis</i>	1	Flushed			Yes			
Chris Pepper	19-Mar-23	evw 141	11:53 AM	BCCH	Black-capped Chickadee	<i>Poecile atricapillus</i>	2	Calling	0					
Chris Pepper	19-Mar-23	evw 141		BOCH	Boreal Chickadee	<i>Poecile hudsonicus</i>	1	Calling	0					

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Project # 25-11682

Observer	Date	Survey Location	Survey Start Time	Species Code	Common Name	Scientific Name	#	Behaviour	Distance (m)	Bearing	Incidental?	Pass Height (m)	Pass Direction	Comments
Chris Pepper	19-Mar-23	evw 141		GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	Calling	0	N				
Chris Pepper	19-Mar-23	evw 142	12:07 PM	AMGO	American Goldfinch	<i>Spinus tristis</i>	1	Flushed			Yes			
Chris Pepper	23-Mar-23	evw 105	7:36 AM	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	Singing	50					
Chris Pepper	23-Mar-23	evw 105		CORA	Common Raven	<i>Corvus corax</i>	1	Calling	1000					
Chris Pepper	23-Mar-23	evw 106	7:54 AM	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	Calling	50					
Chris Pepper	23-Mar-23	evw 106		BOCH	Boreal Chickadee	<i>Poecile hudsonicus</i>	2	Calling	50	SW				
Chris Pepper	23-Mar-23	evw 107	8:12 AM	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	Calling	50					
Chris Pepper	23-Mar-23	evw 107		PIWO	Pileated Woodpecker	<i>Dryocopus pileatus</i>	1	Drumming	250					
Chris Pepper	23-Mar-23	evw 110	8:26 AM	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	1	Calling	250					
Chris Pepper	23-Mar-23	evw 110		N/A	Woodpecker Sp.	N/A	1	Drumming	100					
Chris Pepper	23-Mar-23	evw 110		PIWO	Pileated Woodpecker	<i>Dryocopus pileatus</i>	1	Drumming	100					
Chris Pepper	23-Mar-23	evw 110		GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	Calling	0					
Chris Pepper	23-Mar-23	evw 110		GRAJ	Canada Jay	<i>Perisoreus canadensis</i>	1	Calling	50	NW				
Chris Pepper	23-Mar-23	evw 111	8:44 AM	WIWR	Winter Wren	<i>Troglodytes hiemalis</i>	1	Singing	100					
Chris Pepper	23-Mar-23	evw 112	9:03 AM	N/A	N/A	N/A	0	N/A						No birds observed
Chris Pepper	23-Mar-23	evw 116	9:26 AM	CORA	Common Raven	<i>Corvus corax</i>	1	Calling	500					Waypoint eh cawa 1
Chris Pepper	23-Mar-23	evw 116		PIWO	Pileated Woodpecker	<i>Dryocopus pileatus</i>	1	Calling	100					
Chris Pepper	23-Mar-23	evw 190	9:39 AM	N/A	Woodpecker Sp.	N/A	2	Drumming	100					
Chris Pepper	23-Mar-23	evw 190		HAWO	Hairy Woodpecker	<i>Dryobates villosus</i>	1	Calling	100					
Chris Pepper	23-Mar-23	evw 190		PIWO	Pileated Woodpecker	<i>Dryocopus pileatus</i>	1	Calling	100					
Chris Pepper	23-Mar-23	evw 115	9:54 AM	CORA	Common Raven	<i>Corvus corax</i>	1	Calling	1000					
Chris Pepper	23-Mar-23	Evw 114	10:08 AM	PIWO	Pileated Woodpecker	<i>Dryocopus pileatus</i>	1	Calling	250					
Chris Pepper	23-Mar-23	evw 113	10:23 AM	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	2	Calling	50					
Chris Pepper	23-Mar-23	evw 113		DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1	Flushed			Yes			
Chris Pepper	23-Mar-23	evw 113		FOSP	Fox Sparrow	<i>Passerella iliaca</i>	1	Flushed			Yes			
Chris Pepper	23-Mar-23	evw 108	10:46 AM	BCCH	Black-capped Chickadee	<i>Poecile atricapillus</i>	2	Calling	50					
Chris Pepper	23-Mar-23	evw 108		GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	2	Calling	100					
Chris Pepper	23-Mar-23	evw 108		BOCH	Boreal Chickadee	<i>Poecile hudsonicus</i>	2	Calling	0	NE				
Chris Pepper	23-Mar-23	evw 109	11:02 AM	RECR	Red Crossbill	<i>Loxia curvirostra</i>	2	Calling	50	N				
Chris Pepper	24-Mar-23	evw 174	7:20 AM	BCCH	Black-capped Chickadee	<i>Poecile atricapillus</i>	2	Calling	0					Port Bickerton
Chris Pepper	24-Mar-23	evw 174		BOCH	Boreal Chickadee	<i>Poecile hudsonicus</i>	3	Calling	0	N				
Chris Pepper	24-Mar-23	evw 174		AMCR	American Crow	<i>Corvus brachyrhynchos</i>	1	Calling	100					
Chris Pepper	24-Mar-23	evw 174		RBNJ	Red-breasted Nuthatch	<i>Sitta canadensis</i>	1	Calling	0					
Chris Pepper	24-Mar-23	evw 174		HERG	Herring Gull	<i>Larus argentatus</i>	1	Calling	250					
Chris Pepper	24-Mar-23	evw 174		MODO	Mourning Dove	<i>Zenaida macroura</i>	2	Passing	0	NE		-50	SW	
Chris Pepper	24-Mar-23	evw 174		GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	Calling	0					
Chris Pepper	24-Mar-23	evw 173	7:41 AM	CORA	Common Raven	<i>Corvus corax</i>	1	Passing	0	NW		-50	SE	
Chris Pepper	24-Mar-23	evw 175	8:04 AM	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	2	Calling	50					
Chris Pepper	24-Mar-23	evw 176	8:17 AM	N/A	N/A	N/A	0	N/A						No birds observed
Chris Pepper	24-Mar-23	evw 177	8:28 AM	N/A	Woodpecker Sp.	N/A	1	Drumming	50					
Chris Pepper	24-Mar-23	evw 168	9:17 AM	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	1	Calling	500					
Chris Pepper	24-Mar-23	evw 167	9:31 AM	N/A	N/A	N/A	0	N/A						No birds observed
Chris Pepper	24-Mar-23	evw 164	9:45 AM	CORA	Common Raven	<i>Corvus corax</i>	1	Calling	500					
Chris Pepper	24-Mar-23	evw 187	10:01 AM	N/A	N/A	N/A	0	N/A						No birds observed
Chris Pepper	24-Mar-23	evw 169	10:26 AM	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	Calling	50					
Chris Pepper	24-Mar-23	evw 169		AMCR	American Crow	<i>Corvus brachyrhynchos</i>	2	Calling	250					
Chris Pepper	24-Mar-23	evw 171	10:47 AM	N/A	N/A	N/A	0	N/A						No birds observed
Chris Pepper	24-Mar-23	evw 195	11:00 AM	BCCH	Black-capped Chickadee	<i>Poecile atricapillus</i>	1	Calling	50					
Chris Pepper	24-Mar-23	evw 195		CORA	Common Raven	<i>Corvus corax</i>	1	Calling	500					
Chris Pepper	24-Mar-23	evw 170	11:14 AM	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	2	Calling	0					
Chris Pepper	24-Mar-23	evw 170		BLJA	Blue Jay	<i>Cyanocitta cristata</i>	1	Calling	250					
Chris Pepper	24-Mar-23	evw 172	11:28 AM	N/A	N/A	N/A	0	N/A						No birds observed
Chris Pepper	27-Mar-23	evw 189	7:57 AM	BRCR	Brown Creeper	<i>Certhia americana</i>	1	Calling			Yes			
Chris Pepper	27-Mar-23	evw 189		CANG	Canada Goose	<i>Branta canadensis</i>	2	Calling	500					
Chris Pepper	27-Mar-23	evw 189		BCCH	Black-capped Chickadee	<i>Poecile atricapillus</i>	2	Calling	50					
Chris Pepper	27-Mar-23	evw 157	8:14 AM	PIWO	Pileated Woodpecker	<i>Dryocopus pileatus</i>	2	Calling	100					
Chris Pepper	27-Mar-23	evw 153	8:27 AM	N/A	Woodpecker Sp.	N/A	1	Drumming	100					
Chris Pepper	27-Mar-23	evw 156	8:51 AM	CORA	Common Raven	<i>Corvus corax</i>	1	Calling	500					
Chris Pepper	27-Mar-23	evw 155	9:07 AM	N/A	N/A	N/A	0	N/A						No birds observed
Chris Pepper	27-Mar-23	evw 161	9:41 AM	N/A	N/A	N/A	0	N/A						No birds observed
Chris Pepper	27-Mar-23	evw 163	10:05 AM	N/A	N/A	N/A	0	N/A						No birds observed
Chris Pepper	27-Mar-23	evw 162	10:20 AM	CORA	Common Raven	<i>Corvus corax</i>	1	Calling	1000					
Chris Pepper	27-Mar-23	evw 160	10:35 AM	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	2	Calling	500					
Chris Pepper	27-Mar-23	evw 159	10:53 AM	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	1	Calling	500					

Observer	Date	Survey Location	Survey Start Time	Species Code	Common Name	Scientific Name	#	Behaviour	Distance (m)	Bearing	Incidental?	Pass Height (m)	Pass Direction	Comments
Chris Pepper	27-Mar-23	evw 158	11:09 AM	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	1	Calling	500					
Chris Pepper	27-Mar-23	evw 154	11:24 AM	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	2	Calling	250					
Chris Pepper	27-Mar-23	evw 154		BRCR	Brown Creeper	<i>Certhia americana</i>	1	Calling	100	W				
Chris Pepper	27-Mar-23	evw 154		BCCH	Black-capped Chickadee	<i>Poecile atricapillus</i>	3	Calling	50					
Chris Pepper	29-Mar-23	evw 187	7:45 AM	N/A	N/A	N/A	0	N/A						No birds observed

Table 3: 2023 Winter Bird Survey Results Summary - Harbour Hills Wind Project

Project # 25-11682

Common Name	Scientific Name	SARA Status	COSEWIC Status	ESA Status	NS S-Rank	Number Observed
American Crow	<i>Corvus brachyrhynchos</i>	-	-	-	S5	25
American Goldfinch	<i>Spinus tristis</i>	-	-	-	S5	2
American Goshawk	<i>Astur atricapillus</i>	-	-	-	S3S4	1
Black-capped Chickadee	<i>Poecile atricapillus</i>	-	-	-	S5	79
Blue Jay	<i>Cyanocitta cristata</i>	-	-	-	S5	8
Boreal Chickadee	<i>Poecile hudsonicus</i>	-	-	-	S3	51
Brown Creeper	<i>Certhia americana</i>	-	-	-	S5	4
Canada Goose	<i>Branta canadensis</i>	-	-	-	S5B,S5N	6
Canada Jay	<i>Perisoreus canadensis</i>	-	-	-	S3	6
Common Raven	<i>Corvus corax</i>	-	-	-	S4	48
Dark-eyed Junco	<i>Junco hyemalis</i>	-	-	-	S5	5
Downy Woodpecker	<i>Dryobates pubescens</i>	-	-	-	S5	3
Fox Sparrow	<i>Passerella iliaca</i>	-	-	-	S3B,S4M	1
Golden-crowned Kinglet	<i>Regulus satrapa</i>	-	-	-	S5	85
Hairy Woodpecker	<i>Dryobates villosus</i>	-	-	-	S5	8
Herring Gull	<i>Larus argentatus</i>	-	-	-	S4	7
Mourning Dove	<i>Zenaida macroura</i>	-	-	-	S5	2
Pileated Woodpecker	<i>Dryocopus pileatus</i>	-	-	-	S5	15
Red Crossbill	<i>Loxia curvirostra</i>	-	-	-	S4	3
Red-breasted Nuthatch	<i>Sitta canadensis</i>	-	-	-	S5	2
Ruffed Grouse	<i>Bonasa umbellus</i>	-	-	-	S5	5
Spruce Grouse	<i>Canachites canadensis</i>	-	-	-	S4	3
Winter Wren	<i>Troglodytes hiemalis</i>	-	-	-	S5B	1
Woodpecker Sp.	N/A	N/A	N/A	N/A	N/A	25

Table 4: 2023 Spring Migration Point Count Survey Results - Harbour Hills Wind Project

Project # 25-11682

Observer	Date	Survey Location	Survey Start Time	Species Code	Common Name	Scientific Name	#	Distance (m)	Bearing	Behaviour	Pass Height (m)	Pass Direction	Comments
Chris Pepper	9-Apr-23	evw 105	6:44 AM	AMRO	American Robin	<i>Turdus migratorius</i>	3	50					Calling
Chris Pepper	9-Apr-23	evw 105	6:44 AM	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	2	0		Singing			
Chris Pepper	9-Apr-23	evw 105	6:44 AM	PIWO	Pileated Woodpecker	<i>Dryocopus pileatus</i>	1	100					Calling
Chris Pepper	9-Apr-23	evw 105	6:44 AM	BCCH	Black-capped Chickadee	<i>Poecile atricapillus</i>	2	50					Calling
Chris Pepper	9-Apr-23	evw 105	6:44 AM	CORA	Common Raven	<i>Corvus corax</i>	1	100					Calling
Chris Pepper	9-Apr-23	evw 108	7:09 AM	DOWO	Downy Woodpecker	<i>Dryobates pubescens</i>	1	50					Calling
Chris Pepper	9-Apr-23	evw 108	7:09 AM	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1	0					Calling
Chris Pepper	9-Apr-23	evw 108	7:09 AM	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	1	100					Calling
Chris Pepper	9-Apr-23	evw 109	7:29 AM	FOSP	Fox Sparrow	<i>Passerella iliaca</i>	1	0					Foraging in leaves
Chris Pepper	9-Apr-23	evw 109	7:29 AM	N/A	Woodpecker Sp.	N/A	1	100					Drumming
Chris Pepper	9-Apr-23	evw 106	7:47 AM	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	2	0		Singing			Singing
Chris Pepper	9-Apr-23	evw 106	7:47 AM	AMRO	American Robin	<i>Turdus migratorius</i>	2	0					Calling
Chris Pepper	9-Apr-23	evw 107	8:00 AM	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1	50		Singing			
Chris Pepper	9-Apr-23	evw 107	8:00 AM	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	1	50					
Chris Pepper	9-Apr-23	evw 117	8:14 AM	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	2	0		Singing			
Chris Pepper	9-Apr-23	evw 117	8:14 AM	BOCH	Boreal Chickadee	<i>Poecile hudsonicus</i>	1	0	NW				Calling
Chris Pepper	9-Apr-23	evw 117	8:14 AM	AMRO	American Robin	<i>Turdus migratorius</i>	1						Calling
Chris Pepper	9-Apr-23	evw 117	8:14 AM	CAJA	Canada Jay	<i>Perisoreus canadensis</i>	1	50	N				Calling
Chris Pepper	9-Apr-23	evw 110	8:31 AM	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	0		Singing			
Chris Pepper	9-Apr-23	evw 110	8:31 AM	WIWR	Winter Wren	<i>Troglodytes hiemalis</i>	1	100		Singing			
Chris Pepper	9-Apr-23	evw 111	8:50 AM	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	50					Calling
Chris Pepper	9-Apr-23	evw 111	8:50 AM	WIWR	Winter Wren	<i>Troglodytes hiemalis</i>	1	100		Singing			
Chris Pepper	9-Apr-23	evw 112	9:06 AM	AMRO	American Robin	<i>Turdus migratorius</i>	1	50					Calling
Chris Pepper	9-Apr-23	evw 112	9:06 AM	N/A	Woodpecker Sp.	N/A	1	100					Drumming
Chris Pepper	9-Apr-23	evw 114	9:29 AM	AMRO	American Robin	<i>Turdus migratorius</i>	2	50		Singing			
Chris Pepper	9-Apr-23	evw 114	9:29 AM	SPGR	Spruce Grouse	<i>Canachites canadensis</i>	1	100					Flushed
Chris Pepper	9-Apr-23	evw 115	9:47 AM	N/A	N/A	N/A	0	N/A					No birds observed
Chris Pepper	9-Apr-23	evw 190	10:01 AM	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1	0		Singing			
Chris Pepper	9-Apr-23	evw 190	10:01 AM	HAWO	Hairy Woodpecker	<i>Dryobates villosus</i>	1	50		Drumming			
Chris Pepper	9-Apr-23	evw 190	10:01 AM	CORA	Common Raven	<i>Corvus corax</i>	1	500					Calling
Chris Pepper	9-Apr-23	evw 116	10:14 AM	FOSP	Fox Sparrow	<i>Passerella iliaca</i>	1	100		Singing			Likely just passing through
Chris Pepper	9-Apr-23	evw 116	10:14 AM	BCCH	Black-capped Chickadee	<i>Poecile atricapillus</i>	1	50		Singing			
Chris Pepper	9-Apr-23	evw 113	10:38 AM	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	0					Calling
Chris Pepper	10-Apr-23	evw 118	6:50 AM	WIWR	Winter Wren	<i>Troglodytes hiemalis</i>	1	100		Singing			
Chris Pepper	10-Apr-23	evw 118	6:50 AM	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1	50		Singing			
Chris Pepper	10-Apr-23	evw 118	6:50 AM	N/A	Woodpecker Sp.	N/A	1	100		Drumming			
Chris Pepper	10-Apr-23	evw 118	6:50 AM	CAGO	Woodpecker Sp.	<i>Branta canadensis</i>	2	500	N			SE	Passing
Chris Pepper	10-Apr-23	evw 118	6:50 AM	AMRO	American Robin	<i>Turdus migratorius</i>	1	100					Calling
Chris Pepper	10-Apr-23	evw 130	7:07 AM	BCCH	Black-capped Chickadee	<i>Poecile atricapillus</i>	2	0		Singing			
Chris Pepper	10-Apr-23	evw 130	7:07 AM	WIWR	Winter Wren	<i>Troglodytes hiemalis</i>	1	100		Singing			
Chris Pepper	10-Apr-23	evw 130	7:07 AM	SPGR	Spruce Grouse	<i>Canachites canadensis</i>	1	0					Foraging
Chris Pepper	10-Apr-23	evw 130	7:07 AM	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	0					Calling
Chris Pepper	10-Apr-23	evw 130	7:07 AM	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1	0					Calling
Chris Pepper	10-Apr-23	evw 132	7:22 AM	AMRO	American Robin	<i>Turdus migratorius</i>	1	100					Calling
Chris Pepper	10-Apr-23	evw 132	7:22 AM	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	2	100					Calling
Chris Pepper	10-Apr-23	evw 132	7:22 AM	N/A	Woodpecker Sp.	N/A	1	250		Drumming			Drumming
Chris Pepper	10-Apr-23	evw 132	7:22 AM	CAGO	Canada Goose	<i>Branta canadensis</i>	1	250					Calling
Chris Pepper	10-Apr-23	evw 132	7:22 AM	CORA	Common Raven	<i>Corvus corax</i>	1	250					Calling
Chris Pepper	10-Apr-23	evw 132	7:22 AM	WIWR	Winter Wren	<i>Troglodytes hiemalis</i>	1	100		Singing			
Chris Pepper	10-Apr-23	evw 132	7:22 AM	BCCH	Black-capped Chickadee	<i>Poecile atricapillus</i>	1	100		Singing			
Chris Pepper	10-Apr-23	evw 132	7:22 AM	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	50					Calling
Chris Pepper	10-Apr-23	evw 133	7:36 AM	AMRO	American Robin	<i>Turdus migratorius</i>	1	100					Calling
Chris Pepper	10-Apr-23	evw 133	7:36 AM	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1	50		Singing			
Chris Pepper	10-Apr-23	evw 133	7:36 AM	CAGO	Canada Goose	<i>Branta canadensis</i>	2	250					Calling

Table 4: 2023 Spring Migration Point Count Survey Results - Harbour Hills Wind Project

Project # 25-11682

Observer	Date	Survey Location	Survey Start Time	Species Code	Common Name	Scientific Name	#	Distance (m)	Bearing	Behaviour	Pass Height (m)	Pass Direction	Comments
Chris Pepper	10-Apr-23	evw 133	7:36 AM	N/A	Woodpecker Sp.	N/A	2	250		Drumming			Drumming
Chris Pepper	10-Apr-23	evw 135	7:48 AM	PIWO	Pileated Woodpecker	<i>Dryocopus pileatus</i>	1	250					Calling
Chris Pepper	10-Apr-23	evw 135	7:48 AM	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	0		Singing			
Chris Pepper	10-Apr-23	evw 135	7:48 AM	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	2	0		Singing			
Chris Pepper	10-Apr-23	evw 135	7:48 AM	SPGR	Spruce Grouse	<i>Canachites canadensis</i>	1	0		Displaying			
Chris Pepper	10-Apr-23	evw 135	7:48 AM	N/A	Woodpecker Sp.	N/A	1	250		Drumming			
Chris Pepper	10-Apr-23	evw 123	8:11 AM	GHOW	Great Horned Owl	<i>Bubo virginianus</i>	1	0					Flushed from roadside
Chris Pepper	10-Apr-23	evw 123	8:11 AM	HAWO	Hairy Woodpecker	<i>Dryobates villosus</i>	2	0		Pair			Calling
Chris Pepper	10-Apr-23	evw 123	8:11 AM	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1	0					
Chris Pepper	10-Apr-23	evw 124	8:26 AM	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1	100		Singing			
Chris Pepper	10-Apr-23	evw 124	8:26 AM	BCCH	Black-capped Chickadee	<i>Poecile atricapillus</i>	1	0		Singing			
Chris Pepper	10-Apr-23	evw 124	8:26 AM	CORA	Common Raven	<i>Corvus corax</i>	1						Calling
Chris Pepper	10-Apr-23	evw 124	8:26 AM	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	2	0					Calling
Chris Pepper	10-Apr-23	evw 126	8:54 AM	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1	0		Singing			
Chris Pepper	10-Apr-23	evw 125	9:10 AM	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	2	0		Singing			
Chris Pepper	10-Apr-23	evw 125	9:10 AM	N/A	Woodpecker Sp.	N/A	1	100		Drumming			
Chris Pepper	10-Apr-23	evw 125	9:10 AM	BCCH	Black-capped Chickadee	<i>Poecile atricapillus</i>	1	100		Singing			
Chris Pepper	10-Apr-23	evw 128	9:26 AM	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1	50		Singing			
Chris Pepper	10-Apr-23	evw 128	9:26 AM	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	50		Singing			
Chris Pepper	10-Apr-23	evw 127	9:41 AM	N/A	N/A	N/A	0	N/A					No birds observed
Chris Pepper	10-Apr-23	evw 131	10:01 AM	BOCH	Boreal Chickadee	<i>Poecile hudsonicus</i>	2	50	NE	Calling			
Chris Pepper	10-Apr-23	evw 131	10:01 AM	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1	0		Calling			
Chris Pepper	10-Apr-23	evw 131	10:01 AM	N/A	Woodpecker Sp.	N/A	1	100		Drumming			
Chris Pepper	10-Apr-23	evw 134	10:18 AM	BCCH	Black-capped Chickadee	<i>Poecile atricapillus</i>	1	50		Singing			
Chris Pepper	10-Apr-23	evw 134	10:18 AM	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1	50		Singing			
Chris Pepper	10-Apr-23	evw 134	10:18 AM	AMRO	American Robin	<i>Turdus migratorius</i>	1	50		H			
Chris Pepper	10-Apr-23	evw 134	10:18 AM	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	0		Singing			
Chris Pepper	10-Apr-23	evw 134	10:18 AM	DOWO	Downy Woodpecker	<i>Dryobates pubescens</i>	1	100		H			
Chris Pepper	10-Apr-23	evw 119	10:42 AM	N/A	N/A	N/A	0	N/A					No birds observed
Chris Pepper	10-Apr-23	evw 120	10:55 AM	AMRO	American Robin	<i>Turdus migratorius</i>	1	100		H			
Chris Pepper	10-Apr-23	evw 120	10:55 AM	PIWO	Pileated Woodpecker	<i>Dryocopus pileatus</i>	1	250		H			
Chris Pepper	10-Apr-23	evw 122	11:09 AM	BCCH	Black-capped Chickadee	<i>Poecile atricapillus</i>	2	50		H			
Chris Pepper	10-Apr-23	evw 122	11:09 AM	AMRO	American Robin	<i>Turdus migratorius</i>	1	0		H			
Chris Pepper	10-Apr-23	evw 122	11:09 AM	FOSP	Fox Sparrow	<i>Passerella iliaca</i>	2	0	N				
Chris Pepper	10-Apr-23	evw 121	11:25 AM	WBNU	White-breasted Nuthatch	<i>Sitta carolinensis</i>	1	50	W	Singing			
Chris Pepper	10-Apr-23	evw 121	11:25 AM	HAWO	Hairy Woodpecker	<i>Dryobates villosus</i>	2	0		Pair			
Chris Pepper	10-Apr-23	evw 121	11:25 AM	BCCH	Black-capped Chickadee	<i>Poecile atricapillus</i>	1	100		Singing			
Chris Pepper	11-Apr-23	evw 174	6:41 AM	SPGR	Spruce Grouse	<i>Canachites canadensis</i>	3	0		Displaying			
Chris Pepper	11-Apr-23	evw 174	6:41 AM	BCCH	Black-capped Chickadee	<i>Poecile atricapillus</i>	1	50		Singing			
Chris Pepper	11-Apr-23	evw 174	6:41 AM	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	2	0		H			
Chris Pepper	11-Apr-23	evw 174	6:41 AM	SOSP	Song Sparrow	<i>Melospiza melodia</i>	1	50		Singing			
Chris Pepper	11-Apr-23	evw 174	6:41 AM	AMRO	American Robin	<i>Turdus migratorius</i>	1	100		Singing			
Chris Pepper	11-Apr-23	evw 174	6:41 AM	WISN	Wilson's Snipe	<i>Gallinago delicata</i>	1	250	SW	Winnowing			
Chris Pepper	11-Apr-23	evw 174	6:41 AM	CORA	Common Raven	<i>Corvus corax</i>	1	500		H			
Chris Pepper	11-Apr-23	evw 174	6:41 AM	MODO	Mourning Dove	<i>Zenaida macroura</i>	1	250		S			
Chris Pepper	11-Apr-23	evw 173	7:00 AM	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	3	0		S			
Chris Pepper	11-Apr-23	evw 173	7:00 AM	HAWO	Hairy Woodpecker	<i>Dryobates villosus</i>	1	50		H			
Chris Pepper	11-Apr-23	evw 173	7:00 AM	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	2	500		H			
Chris Pepper	11-Apr-23	evw 175	7:19 AM	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	2	0		S			
Chris Pepper	11-Apr-23	evw 175	7:19 AM	SOSP	Song Sparrow	<i>Melospiza melodia</i>	1	100		S			
Chris Pepper	11-Apr-23	evw 175	7:19 AM	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	2	0		S			
Chris Pepper	11-Apr-23	evw 175	7:19 AM	AMRO	American Robin	<i>Turdus migratorius</i>	1	100		H			
Chris Pepper	11-Apr-23	evw 175	7:19 AM	COGR	Common Grackle	<i>Quiscalus quiscula</i>	6	0	S	Flying	-50	N	
Chris Pepper	11-Apr-23	evw 175	7:19 AM	RUGR	Ruffed Grouse	<i>Bonasa umbellus</i>	1	0		D			

Table 4: 2023 Spring Migration Point Count Survey Results - Harbour Hills Wind Project

Project # 25-11682

Observer	Date	Survey Location	Survey Start Time	Species Code	Common Name	Scientific Name	#	Distance (m)	Bearing	Behaviour	Pass Height (m)	Pass Direction	Comments
Chris Pepper	11-Apr-23	evw 175	7:19 AM	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	1	500		H			
Chris Pepper	11-Apr-23	evw 175	7:19 AM	SPGR	Spruce Grouse	<i>Canachites canadensis</i>	1	0		D			
Chris Pepper	11-Apr-23	evw 176	7:33 AM	AMRO	American Robin	<i>Turdus migratorius</i>	1	100		H			
Chris Pepper	11-Apr-23	evw 176	7:33 AM	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	2	50		S			
Chris Pepper	11-Apr-23	evw 176	7:33 AM	ABDU	American Black Duck	<i>Anas rubripes</i>	1	250		H			
Chris Pepper	11-Apr-23	evw 176	7:33 AM	COGR	Common Grackle	<i>Quiscalus quiscula</i>	1	100		H			
Chris Pepper	11-Apr-23	evw 177	7:46 AM	SOSP	Song Sparrow	<i>Melospiza melodia</i>	1	100		S			
Chris Pepper	11-Apr-23	evw 177	7:46 AM	HAWO	Hairy Woodpecker	<i>Dryobates villosus</i>	1	100		H			
Chris Pepper	11-Apr-23	evw 177	7:46 AM	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	2	50		S			
Chris Pepper	11-Apr-23	evw 177	7:46 AM	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	1	250		H			
Chris Pepper	11-Apr-23	evw 177	7:46 AM	CORA	Common Raven	<i>Corvus corax</i>	1	500		H			
Chris Pepper	11-Apr-23	evw 177	7:46 AM	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	2	0		H			
Chris Pepper	11-Apr-23	evw 177	7:46 AM	COLO	Common Loon	<i>Gavia immer</i>	1	1000		X			
Chris Pepper	11-Apr-23	evw 177	7:46 AM	N/A	Blackbird Sp.	<i>N/A</i>	1	250		X			
Chris Pepper	11-Apr-23	evw 168	8:25 AM	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	2	0		S			
Chris Pepper	11-Apr-23	evw 167	8:40 AM	CORA	Common Raven	<i>Corvus corax</i>	2	100		H			
Chris Pepper	11-Apr-23	evw 167	8:40 AM	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	2	0		H			
Chris Pepper	11-Apr-23	evw 167	8:40 AM	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1	0		S			
Chris Pepper	11-Apr-23	evw 167	8:40 AM	N/A	Blackbird Sp.	<i>N/A</i>	1	250		X			
Chris Pepper	11-Apr-23	evw 164	8:56 AM	AMRO	American Robin	<i>Turdus migratorius</i>	2	100		H			
Chris Pepper	11-Apr-23	evw 164	8:56 AM	N/A	Blackbird Sp.	<i>N/A</i>	1	100		X			
Chris Pepper	11-Apr-23	evw 164	8:56 AM	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1	50		S			
Chris Pepper	11-Apr-23	evw 164	8:56 AM	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	50		S			
Chris Pepper	11-Apr-23	evw 164	8:56 AM	CAGO	Canada Goose	<i>Branta canadensis</i>	1	500		X			
Chris Pepper	11-Apr-23	evw 169	9:24 AM	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	2	0		S			
Chris Pepper	11-Apr-23	evw 169	9:24 AM	HERG	Herring Gull	<i>Larus argentatus</i>	1	500		H			
Chris Pepper	11-Apr-23	evw 169	9:24 AM	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	2	100		H			
Chris Pepper	11-Apr-23	evw 169	9:24 AM	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	0		S			
Chris Pepper	11-Apr-23	evw 195	9:42 AM	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1	0		S			
Chris Pepper	11-Apr-23	evw 195	9:42 AM	RUGR	Ruffed Grouse	<i>Bonasa umbellus</i>	1	0		D			
Chris Pepper	11-Apr-23	evw 195	9:58 AM	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	0		S			
Chris Pepper	11-Apr-23	evw 195	9:58 AM	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	2	0		H			
Chris Pepper	11-Apr-23	evw 195	9:58 AM	BCCH	Black-capped Chickadee	<i>Poecile atricapillus</i>	1	0		H			
Chris Pepper	11-Apr-23	evw 195	9:58 AM	PIWO	Pileated Woodpecker	<i>Dryocopus pileatus</i>	1	100		H			
Chris Pepper	11-Apr-23	evw 170	10:19 AM	SPGR	Spruce Grouse	<i>Canachites canadensis</i>	2	inc		H			
Chris Pepper	11-Apr-23	evw 170	10:19 AM	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	2	0		S			
Chris Pepper	11-Apr-23	evw 170	10:19 AM	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	0		S			
Chris Pepper	11-Apr-23	evw 172	10:37 AM	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1	0		S			
Chris Pepper	11-Apr-23	evw 172	10:37 AM	CORA	Common Raven	<i>Corvus corax</i>	1	1000		H			
Chris Pepper	13-Apr-23	evw 154	7:02 AM	SOSP	Song Sparrow	<i>Melospiza melodia</i>	1	0		S			
Chris Pepper	13-Apr-23	evw 154	7:02 AM	BRCR	Brown Creeper	<i>Certhia americana</i>	1	0		H			
Chris Pepper	13-Apr-23	evw 154	7:02 AM	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	2	250		H			
Chris Pepper	13-Apr-23	evw 158	7:19 AM	CAGO	Canada Goose	<i>Branta canadensis</i>	2	250		H			
Chris Pepper	13-Apr-23	evw 158	7:19 AM	BRCR	Brown Creeper	<i>Certhia americana</i>	1	0		S			
Chris Pepper	13-Apr-23	evw 158	7:19 AM	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	0		H			
Chris Pepper	13-Apr-23	evw 158	7:19 AM	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	1	100		H			
Chris Pepper	13-Apr-23	evw 161	7:50 AM	HAWO	Hairy Woodpecker	<i>Dryobates villosus</i>	2	50		H			
Chris Pepper	13-Apr-23	evw 161	7:50 AM	PIWO	Pileated Woodpecker	<i>Dryocopus pileatus</i>	2	250		H			
Chris Pepper	13-Apr-23	evw 161	7:50 AM	NOFL	Northern Flicker	<i>Colaptes auratus</i>	2	100		H			
Chris Pepper	13-Apr-23	evw 161	7:50 AM	N/A	Woodpecker Sp.	<i>N/A</i>	1	100		H			
Chris Pepper	13-Apr-23	evw 161	7:50 AM	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	1	100		H			
Chris Pepper	13-Apr-23	evw 163	8:14 AM	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	2	0		S			
Chris Pepper	13-Apr-23	evw 163	8:14 AM	N/A	Woodpecker Sp.	<i>N/A</i>	2	100		H			
Chris Pepper	13-Apr-23	evw 163	8:14 AM	CORA	Common Raven	<i>Corvus corax</i>	1	500		H			

Table 4: 2023 Spring Migration Point Count Survey Results - Harbour Hills Wind Project

Project # 25-11682

Observer	Date	Survey Location	Survey Start Time	Species Code	Common Name	Scientific Name	#	Distance (m)	Bearing	Behaviour	Pass Height (m)	Pass Direction	Comments
Chris Pepper	13-Apr-23	evw 163	8:14 AM	SPGR	Spruce Grouse	<i>Canachites canadensis</i>	1	0		D			
Chris Pepper	13-Apr-23	evw 162	8:31 AM	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	0		S			
Chris Pepper	13-Apr-23	evw 162	8:31 AM	SPGR	Spruce Grouse	<i>Canachites canadensis</i>	1	0		D			
Chris Pepper	13-Apr-23	evw 162	8:31 AM	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1	0		H			
Chris Pepper	13-Apr-23	evw 162	8:31 AM	CAGO	Canada Goose	<i>Branta canadensis</i>	2	500		H			
Chris Pepper	13-Apr-23	evw 162	8:31 AM	CAJA	Canada Jay	<i>Perisoreus canadensis</i>	1	50	W	H			
Chris Pepper	13-Apr-23	evw 162	8:31 AM	AMRO	American Robin	<i>Turdus migratorius</i>	1	250		H			
Chris Pepper	13-Apr-23	evw 162	8:31 AM	RWBL	Red-winged Blackbird	<i>Agelaius phoeniceus</i>	1	100	N	Z	50+	SW	
Chris Pepper	13-Apr-23	evw 160	8:48 AM	BOCH	Boreal Chickadee	<i>Poecile hudsonicus</i>	2	0	N	P			
Chris Pepper	13-Apr-23	evw 160	8:48 AM	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	2	0		S			
Chris Pepper	13-Apr-23	evw 160	8:48 AM	N/A	Woodpecker Sp.	N/A	1	100		H			
Chris Pepper	13-Apr-23	evw 160	8:48 AM	PIWO	Pileated Woodpecker	<i>Dryocopus pileatus</i>	1	100		H			
Chris Pepper	13-Apr-23	evw 159	9:03 AM	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1	100		H			
Chris Pepper	13-Apr-23	evw 159	9:03 AM	BCCH	Black-capped Chickadee	<i>Poecile atricapillus</i>	2	0		H			
Chris Pepper	13-Apr-23	evw 159	9:03 AM	AMRO	American Robin	<i>Turdus migratorius</i>	1	100		H			
Chris Pepper	13-Apr-23	evw 159	9:03 AM	N/A	Woodpecker Sp.	N/A	3	100		H			
Chris Pepper	13-Apr-23	evw 155	9:22 AM	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	0		H			
Chris Pepper	13-Apr-23	evw 155	9:22 AM	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	1	100		H			
Chris Pepper	13-Apr-23	evw 156	9:39 AM	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1	100		S			
Chris Pepper	13-Apr-23	evw 156	9:39 AM	PIWO	Pileated Woodpecker	<i>Dryocopus pileatus</i>	1	100		H			
Chris Pepper	13-Apr-23	evw 156	9:39 AM	AMRO	American Robin	<i>Turdus migratorius</i>	1	100		H			
Chris Pepper	13-Apr-23	evw 189	9:56 AM	DOWO	Downy Woodpecker	<i>Dryobates pubescens</i>	1	100		H			
Chris Pepper	13-Apr-23	evw 189	9:56 AM	MERL	Merlin	<i>Falco columbarius</i>	1	100	NE	Flying	-50	W	
Chris Pepper	13-Apr-23	evw 189	9:56 AM	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1	100		S			
Chris Pepper	13-Apr-23	evw 189	9:56 AM	CORA	Common Raven	<i>Corvus corax</i>	2	250		H			
Chris Pepper	13-Apr-23	evw 189	9:56 AM	BOCH	Boreal Chickadee	<i>Poecile hudsonicus</i>	2	0	N	H			
Chris Pepper	13-Apr-23	evw 157	10:16 AM	CORA	Common Raven	<i>Corvus corax</i>	2	100		H			
Chris Pepper	13-Apr-23	evw 157	10:16 AM	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1	0		S			
Chris Pepper	13-Apr-23	evw 157	10:16 AM	N/A	Woodpecker Sp.	N/A	1	100		H			
Chris Pepper	13-Apr-23	evw 196(new)	10:35 AM	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1	0		H			
Chris Pepper	13-Apr-23	evw 196(new)	10:35 AM	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	2	0		H			
Chris Pepper	13-Apr-23	evw 153	10:54 AM	CORA	Common Raven	<i>Corvus corax</i>	9	500	NE	H	250+	SE	
Chris Pepper	16-Apr-23	evw 135	6:41 AM	HETH	Hermit Thrush	<i>Catharus guttatus</i>	1	0		S			
Chris Pepper	16-Apr-23	evw 135	6:41 AM	WIWR	Winter Wren	<i>Troglodytes hiemalis</i>	1	100		S			
Chris Pepper	16-Apr-23	evw 135	6:41 AM	GHOW	Great Horned Owl	<i>Bubo virginianus</i>	1	500		H			
Chris Pepper	16-Apr-23	evw 135	6:41 AM	N/A	Woodpecker Sp.	N/A	1	100		H			
Chris Pepper	16-Apr-23	evw 135	6:41 AM	NOFL	Northern Flicker	<i>Colaptes auratus</i>	1	100		H			
Chris Pepper	16-Apr-23	evw 135	6:41 AM	HAWO	Hairy Woodpecker	<i>Dryobates villosus</i>	1	50		H			
Chris Pepper	16-Apr-23	evw 152	7:14 AM	SPGR	Spruce Grouse	<i>Canachites canadensis</i>	1	0		H			
Chris Pepper	16-Apr-23	evw 152	7:14 AM	AMKE	American Kestrel	<i>Falco sparverius</i>	1	50	SE	H			
Chris Pepper	16-Apr-23	evw 152	7:14 AM	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1	0		H			
Chris Pepper	16-Apr-23	evw 152	7:14 AM	PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1	0		H			
Chris Pepper	16-Apr-23	evw 152	7:14 AM	NOFL	Northern Flicker	<i>Colaptes auratus</i>	1	100		H			
Chris Pepper	16-Apr-23	evw 142	7:33 AM	PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1	0		H			
Chris Pepper	16-Apr-23	evw 142	7:33 AM	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	2	0		H			
Chris Pepper	16-Apr-23	evw 142	7:33 AM	NOFL	Northern Flicker	<i>Colaptes auratus</i>	1	100		H			
Chris Pepper	16-Apr-23	evw 141	7:50 AM	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	0		H			
Chris Pepper	16-Apr-23	evw 141	7:50 AM	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1	0		H			
Chris Pepper	16-Apr-23	evw 141	7:50 AM	PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1	0		H			
Chris Pepper	16-Apr-23	evw 141	7:50 AM	NOFL	Northern Flicker	<i>Colaptes auratus</i>	1	50		H			
Chris Pepper	16-Apr-23	evw 140	8:03 AM	PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1	0		S			
Chris Pepper	16-Apr-23	evw 140	8:03 AM	HAWO	Hairy Woodpecker	<i>Dryobates villosus</i>	1	0		H			
Chris Pepper	16-Apr-23	evw 139	8:16 AM	PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1	0		H			
Chris Pepper	16-Apr-23	evw 139	8:16 AM	CORA	Common Raven	<i>Corvus corax</i>	1	1000		H			

Table 4: 2023 Spring Migration Point Count Survey Results - Harbour Hills Wind Project

Project # 25-11682

Observer	Date	Survey Location	Survey Start Time	Species Code	Common Name	Scientific Name	#	Distance (m)	Bearing	Behaviour	Pass Height (m)	Pass Direction	Comments
Chris Pepper	16-Apr-23	evw 139	8:16 AM	NOFL	Northern Flicker	<i>Colaptes auratus</i>	1	50		H			
Chris Pepper	16-Apr-23	evw 137	8:33 AM	RUGR	Ruffed Grouse	<i>Bonasa umbellus</i>	1	0		H			
Chris Pepper	16-Apr-23	evw 137	8:33 AM	NOFL	Northern Flicker	<i>Colaptes auratus</i>	1	100		D			
Chris Pepper	16-Apr-23	evw 137	8:33 AM	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	1	100		H			
Chris Pepper	16-Apr-23	evw 137	8:33 AM	PIWO	Pileated Woodpecker	<i>Dryocopus pileatus</i>	2	100		H			
Chris Pepper	16-Apr-23	evw 137	8:33 AM	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1	100		H			
Chris Pepper	16-Apr-23	evw 138	8:47 AM	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	0		H			
Chris Pepper	16-Apr-23	evw 138	8:47 AM	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1	0		H			
Chris Pepper	16-Apr-23	evw 138	8:47 AM	N/A	Woodpecker Sp.	N/A	1	100		H			
Chris Pepper	16-Apr-23	evw 138	8:47 AM	NOFL	Northern Flicker	<i>Colaptes auratus</i>	2	50		H			
Chris Pepper	16-Apr-23	evw 138	8:47 AM	AMRO	American Robin	<i>Turdus migratorius</i>	1	100		S			
Chris Pepper	16-Apr-23	evw 138	8:47 AM	RUGR	Ruffed Grouse	<i>Bonasa umbellus</i>	2	0		H			
Chris Pepper	16-Apr-23	evw 138	8:47 AM	CAJA	Canada Jay	<i>Perisoreus canadensis</i>	1	100	S	H			
Chris Pepper	16-Apr-23	evw 136	9:04 AM	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1	0		S			
Chris Pepper	16-Apr-23	evw 136	9:04 AM	NOFL	Northern Flicker	<i>Colaptes auratus</i>	1	100		S			
Chris Pepper	16-Apr-23	evw 134	9:21 AM	PIWO	Pileated Woodpecker	<i>Dryocopus pileatus</i>	1	100		S			
Chris Pepper	16-Apr-23	evw 134	9:21 AM	BCCH	Black-capped Chickadee	<i>Poecile atricapillus</i>	1	50		S			
Chris Pepper	16-Apr-23	evw 134	9:21 AM	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1	0		H			
Chris Pepper	16-Apr-23	evw 134	9:21 AM	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	0		H			
Chris Pepper	16-Apr-23	evw 143	9:43 AM	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	0		H			
Chris Pepper	16-Apr-23	evw 143	9:43 AM	YBSA	Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>	1	50		H			
Chris Pepper	16-Apr-23	evw 143	9:43 AM	HAWO	Hairy Woodpecker	<i>Dryobates villosus</i>	1	50		H			
Chris Pepper	16-Apr-23	evw 143	9:43 AM	BDOW	Barred Owl	<i>Strix varia</i>	2	0		A			Agitated pair
Chris Pepper	16-Apr-23	evw 143	9:43 AM	DOWO	Downy Woodpecker	<i>Dryobates pubescens</i>	1	0		H			
Chris Pepper	16-Apr-23	evw 150	10:01 AM	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	2	0		S			
Chris Pepper	16-Apr-23	evw 150	10:01 AM	WIWR	Winter Wren	<i>Troglodytes hiemalis</i>	1	50		S			
Chris Pepper	16-Apr-23	evw 150	10:01 AM	NOFL	Northern Flicker	<i>Colaptes auratus</i>	1	100		H			
Chris Pepper	16-Apr-23	evw 150	10:01 AM	CORA	Common Raven	<i>Corvus corax</i>	1	250	S	Flying	-50	W	
Chris Pepper	16-Apr-23	evw 151	10:17 AM	HAWO	Hairy Woodpecker	<i>Dryobates villosus</i>	1	0		H			
Chris Pepper	16-Apr-23	evw 144	10:37 AM	PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1	50		S			
Chris Pepper	16-Apr-23	evw 144	10:37 AM	BCCH	Black-capped Chickadee	<i>Poecile atricapillus</i>	2	50		H			
Chris Pepper	16-Apr-23	evw 144	10:37 AM	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	2	0		H			
Chris Pepper	16-Apr-23	evw 145	10:50 AM	SPGR	Spruce Grouse	<i>Canachites canadensis</i>	1	100		H			Flushed from road
Chris Pepper	16-Apr-23	evw 145	10:50 AM	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	1	50		H			
Chris Pepper	16-Apr-23	evw 145	10:50 AM	WISN	Wilson's Snipe	<i>Gallinago delicata</i>	1	250	SW	X			
Chris Pepper	16-Apr-23	evw 146	11:06 AM	BOCH	Boreal Chickadee	<i>Poecile hudsonicus</i>	2	0	SW	H			
Chris Pepper	16-Apr-23	evw 146	11:06 AM	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1	0		H			
Chris Pepper	16-Apr-23	evw 146	11:06 AM	NOFL	Northern Flicker	<i>Colaptes auratus</i>	1	100		H			
Chris Pepper	16-Apr-23	evw 146	11:06 AM	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	0		H			
Chris Pepper	16-Apr-23	evw 147	11:19 AM	NOFL	Northern Flicker	<i>Colaptes auratus</i>	1	100		H			
Chris Pepper	16-Apr-23	evw 147	11:19 AM	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	50		H			
Chris Pepper	16-Apr-23	evw 147	11:19 AM	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1	0		H			
Chris Pepper	16-Apr-23	evw 148	11:33 AM	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	2	0		S			
Chris Pepper	16-Apr-23	evw 148	11:33 AM	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1	0		H			
Chris Pepper	16-Apr-23	evw 149	11:46 AM	NOFL	Northern Flicker	<i>Colaptes auratus</i>	1	100		H			
Chris Pepper	16-Apr-23	evw 149	11:46 AM	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	0		H			
Chris Pepper	16-Apr-23	evw 149	11:46 AM	WIWR	Winter Wren	<i>Troglodytes hiemalis</i>	1	100		S			
Chris Pepper	16-Apr-23	evw 149	11:46 AM	RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1	100		S			
Chris Pepper	27-Apr-23	evw 187	6:57 AM	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1	50		H			
Chris Pepper	27-Apr-23	evw 187	6:57 AM	AMRO	American Robin	<i>Turdus migratorius</i>	1	50		S			
Chris Pepper	27-Apr-23	evw 187	6:57 AM	YBSA	Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>	2	100		H			
Chris Pepper	27-Apr-23	evw 187	6:57 AM	WIWR	Winter Wren	<i>Troglodytes hiemalis</i>	1	100		S			
Chris Pepper	27-Apr-23	evw 187	6:57 AM	HETH	Hermit Thrush	<i>Catharus guttatus</i>	1	50		H			
Chris Pepper	1-May-23	evw 154	6:28 AM	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	2	100		H			

Table 4: 2023 Spring Migration Point Count Survey Results - Harbour Hills Wind Project

Project # 25-11682

Observer	Date	Survey Location	Survey Start Time	Species Code	Common Name	Scientific Name	#	Distance (m)	Bearing	Behaviour	Pass Height (m)	Pass Direction	Comments
Chris Pepper	1-May-23	evw 154	6:28 AM	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1	0		S			
Chris Pepper	1-May-23	evw 154	6:28 AM	AMRO	American Robin	<i>Turdus migratorius</i>	1	50		S			
Chris Pepper	1-May-23	evw 154	6:28 AM	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	1	100		H			
Chris Pepper	1-May-23	evw 156	6:58 AM	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1	0		S			
Chris Pepper	1-May-23	evw 156	6:58 AM	PAWA	Palm Warbler	<i>Setophaga palmarum</i>	3	0		S			
Chris Pepper	1-May-23	evw 156	6:58 AM	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	2	50		S			
Chris Pepper	1-May-23	evw 156	6:58 AM	GRYE	Greater Yellowlegs	<i>Tringa melanoleuca</i>	2	100	NE	Flying	50	W	
Chris Pepper	1-May-23	evw 156	6:58 AM	NOFL	Northern Flicker	<i>Colaptes auratus</i>	1	100		H			
Chris Pepper	1-May-23	evw 156	6:58 AM	AMRO	American Robin	<i>Turdus migratorius</i>	1	100		S			
Chris Pepper	1-May-23	evw 156	6:58 AM	HETH	Hermit Thrush	<i>Catharus guttatus</i>	1	50		H			
Chris Pepper	1-May-23	evw 156	6:58 AM	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1	0		H			
Chris Pepper	1-May-23	evw 156	6:58 AM	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	50		H			
Chris Pepper	1-May-23	evw 189	7:14 AM	NOFL	Northern Flicker	<i>Colaptes auratus</i>	1	50		H			
Chris Pepper	1-May-23	evw 189	7:14 AM	AMKE	American Kestrel	<i>Falco sparverius</i>	1	50		H			
Chris Pepper	1-May-23	evw 189	7:14 AM	PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1	50		H			
Chris Pepper	1-May-23	evw 189	7:14 AM	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1	100		S			
Chris Pepper	1-May-23	evw 189	7:14 AM	BCCH	Black-capped Chickadee	<i>Poecile atricapillus</i>	1	100		S			
Chris Pepper	1-May-23	evw 189	7:14 AM	RBNU	Red-breasted Nuthatch	<i>Sitta canadensis</i>	1	0		H			
Chris Pepper	1-May-23	evw 189	7:14 AM	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1	0		H			
Chris Pepper	1-May-23	evw 189	7:14 AM	HAWO	Hairy Woodpecker	<i>Dryobates villosus</i>	1	100		H			
Chris Pepper	1-May-23	evw 189	7:14 AM	CORA	Common Raven	<i>Corvus corax</i>	1	500		X			
Chris Pepper	1-May-23	evw 157	7:30 AM	PAWA	Palm Warbler	<i>Setophaga palmarum</i>	3	0		S			
Chris Pepper	1-May-23	evw 157	7:30 AM	RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1	100	E	S			
Chris Pepper	1-May-23	evw 157	7:30 AM	CORA	Common Raven	<i>Corvus corax</i>	4	500		H			
Chris Pepper	1-May-23	evw 157	7:30 AM	WIWR	Winter Wren	<i>Troglodytes hiemalis</i>	1	100		S			
Chris Pepper	1-May-23	evw 157	7:30 AM	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1	50		H			
Chris Pepper	1-May-23	evw 157	7:30 AM	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1	0		S			
Chris Pepper	1-May-23	evw 196	7:43 AM	HETH	Hermit Thrush	<i>Catharus guttatus</i>	1	0		H			
Chris Pepper	1-May-23	evw 196	7:43 AM	PAWA	Palm Warbler	<i>Setophaga palmarum</i>	2	0		S			
Chris Pepper	1-May-23	evw 196	7:43 AM	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	2	50		S			
Chris Pepper	1-May-23	evw 196	7:43 AM	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	2	0		H			
Chris Pepper	1-May-23	evw 196	7:43 AM	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	0		S			
Chris Pepper	1-May-23	evw 196	7:43 AM	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	1	500		X			
Chris Pepper	1-May-23	evw 196	7:43 AM	RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1	50	NE	S			
Chris Pepper	1-May-23	evw 196	7:43 AM	WIWR	Winter Wren	<i>Troglodytes hiemalis</i>	1	50		S			
Chris Pepper	1-May-23	evw 153	7:57 AM	PAWA	Palm Warbler	<i>Setophaga palmarum</i>	2	0		S			
Chris Pepper	1-May-23	evw 153	7:57 AM	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	2	50		H			
Chris Pepper	1-May-23	evw 153	7:57 AM	WIWR	Winter Wren	<i>Troglodytes hiemalis</i>	1	100		S			
Chris Pepper	1-May-23	evw 155	8:13 AM	RUGR	Ruffed Grouse	<i>Bonasa umbellus</i>	1	100		H			
Chris Pepper	1-May-23	evw 155	8:13 AM	BCCH	Black-capped Chickadee	<i>Poecile atricapillus</i>	2	50		S			
Chris Pepper	1-May-23	evw 155	8:13 AM	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	2	50		H			
Chris Pepper	1-May-23	evw 158	8:32 AM	BRCR	Brown Creeper	<i>Certhia americana</i>	1	50		S			
Chris Pepper	1-May-23	evw 158	8:32 AM	BCCH	Black-capped Chickadee	<i>Poecile atricapillus</i>	2	50		H			
Chris Pepper	1-May-23	evw 158	8:32 AM	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	0		H			
Chris Pepper	1-May-23	evw 158	8:32 AM	AMRO	American Robin	<i>Turdus migratorius</i>	1	50		S			
Chris Pepper	1-May-23	evw 158	8:32 AM	HETH	Hermit Thrush	<i>Catharus guttatus</i>	1	50		H			
Chris Pepper	1-May-23	evw 159	8:50 AM	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	0		H			
Chris Pepper	1-May-23	evw 159	8:50 AM	RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1	100	N	S			
Chris Pepper	1-May-23	evw 159	8:50 AM	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	2	0		H			
Chris Pepper	1-May-23	evw 161	9:05 AM	RUGR	Ruffed Grouse	<i>Bonasa umbellus</i>	1	50		D			
Chris Pepper	1-May-23	evw 161	9:05 AM	NOFL	Northern Flicker	<i>Colaptes auratus</i>	1	100		H			
Chris Pepper	1-May-23	evw 161	9:05 AM	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1	0		H			
Chris Pepper	1-May-23	evw 161	9:05 AM	PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1	0		S			
Chris Pepper	1-May-23	evw 161	9:05 AM	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	0		S			

Table 4: 2023 Spring Migration Point Count Survey Results - Harbour Hills Wind Project

Project # 25-11682

Observer	Date	Survey Location	Survey Start Time	Species Code	Common Name	Scientific Name	#	Distance (m)	Bearing	Behaviour	Pass Height (m)	Pass Direction	Comments
Chris Pepper	1-May-23	evw 161	9:05 AM	HETH	Hermit Thrush	<i>Catharus guttatus</i>	1	0		H			
Chris Pepper	1-May-23	evw 161	9:05 AM	RCK	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1	50		S			
Chris Pepper	1-May-23	evw 161	9:05 AM	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1	50		H			
Chris Pepper	1-May-23	evw 161	9:05 AM	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1	50		S			
Chris Pepper	1-May-23	evw 162	9:22 AM	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1	0		S			
Chris Pepper	1-May-23	evw 162	9:22 AM	PAWA	Palm Warbler	<i>Setophaga palmarum</i>	2	0		H			
Chris Pepper	1-May-23	evw 162	9:22 AM	NOFL	Northern Flicker	<i>Colaptes auratus</i>	1	100		H			
Chris Pepper	1-May-23	evw 163	9:41 AM	BCCH	Black-capped Chickadee	<i>Poecile atricapillus</i>	2	0		H			
Chris Pepper	1-May-23	evw 163	9:41 AM	HETH	Hermit Thrush	<i>Catharus guttatus</i>	1	0		H			
Chris Pepper	1-May-23	evw 163	9:41 AM	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	0		H			
Chris Pepper	1-May-23	evw 163	9:41 AM	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1	50		S			
Chris Pepper	1-May-23	evw 163	9:41 AM	RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1	50	W	S			
Chris Pepper	1-May-23	evw 163	9:41 AM	HAWO	Hairy Woodpecker	<i>Dryobates villosus</i>	1	50		H			
Chris Pepper	1-May-23	evw 160	10:00 AM	BOCH	Boreal Chickadee	<i>Poecile hudsonicus</i>	2	0	E	H			
Chris Pepper	1-May-23	evw 160	10:00 AM	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	0		H			
Chris Pepper	1-May-23	evw 160	10:00 AM	NOFL	Northern Flicker	<i>Colaptes auratus</i>	1	100		H			
Chris Pepper	1-May-23	evw 160	10:00 AM	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1	50		H			
Chris Pepper	3-May-23	evw 105	5:55 AM	BRCR	Brown Creeper	<i>Certhia americana</i>	1	50		S			
Chris Pepper	3-May-23	evw 105	5:55 AM	BCCH	Black-capped Chickadee	<i>Poecile atricapillus</i>	1	50		S			
Chris Pepper	3-May-23	evw 105	5:55 AM	HETH	Hermit Thrush	<i>Catharus guttatus</i>	1	0		H			
Chris Pepper	3-May-23	evw 105	5:55 AM	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1	0		H			
Chris Pepper	3-May-23	evw 105	5:55 AM	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	0		H			
Chris Pepper	3-May-23	evw 105	5:55 AM	WIWR	Winter Wren	<i>Troglodytes hiemalis</i>	1	100		S			
Chris Pepper	3-May-23	evw 108	6:16 AM	RUGR	Ruffed Grouse	<i>Bonasa umbellus</i>	1	100		H			
Chris Pepper	3-May-23	evw 108	6:16 AM	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	2	50		H			
Chris Pepper	3-May-23	evw 108	6:16 AM	AMRO	American Robin	<i>Turdus migratorius</i>	1	100		S			
Chris Pepper	3-May-23	evw 109	6:34 AM	WIWR	Winter Wren	<i>Troglodytes hiemalis</i>	1	100		S			
Chris Pepper	3-May-23	evw 109	6:34 AM	AMRO	American Robin	<i>Turdus migratorius</i>	1	0		S			
Chris Pepper	3-May-23	evw 109	6:34 AM	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1	50		H			
Chris Pepper	3-May-23	evw 117	6:59 AM	PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1	50		H			
Chris Pepper	3-May-23	evw 117	6:59 AM	AMRO	American Robin	<i>Turdus migratorius</i>	1	100		S			
Chris Pepper	3-May-23	evw 118	7:18 AM	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1	50		S			
Chris Pepper	3-May-23	evw 118	7:18 AM	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	50		H			
Chris Pepper	3-May-23	evw 130	7:38 AM	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	2	0		H			
Chris Pepper	3-May-23	evw 130	7:38 AM	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	2	0		S			
Chris Pepper	3-May-23	evw 130	7:38 AM	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	2	0		H			
Chris Pepper	3-May-23	evw 131	7:52 AM	RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1	100	NE	S			
Chris Pepper	3-May-23	evw 131	7:52 AM	NOFL	Northern Flicker	<i>Colaptes auratus</i>	1	100		S			
Chris Pepper	3-May-23	evw 131	7:52 AM	PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1	50		S			
Chris Pepper	3-May-23	evw 131	7:52 AM	RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1	0	W	S			
Chris Pepper	3-May-23	evw 131	7:52 AM	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1	50		S			
Chris Pepper	3-May-23	evw 131	7:52 AM	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1	0		H			
Chris Pepper	3-May-23	evw 132	8:09 AM	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1	0		S			
Chris Pepper	3-May-23	evw 132	8:09 AM	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1	0		S			
Chris Pepper	3-May-23	evw 132	8:09 AM	RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1	50	N	S			
Chris Pepper	3-May-23	evw 132	8:09 AM	PAWA	Palm Warbler	<i>Setophaga palmarum</i>	3	0		S			
Chris Pepper	3-May-23	evw 132	8:09 AM	WIWR	Winter Wren	<i>Troglodytes hiemalis</i>	1	100		S			
Chris Pepper	3-May-23	evw 132	8:09 AM	CORA	Common Raven	<i>Corvus corax</i>	1	100		H			
Chris Pepper	3-May-23	evw 132	8:09 AM	HETH	Hermit Thrush	<i>Catharus guttatus</i>	1	100		S			
Chris Pepper	3-May-23	evw 132	8:09 AM	RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1	100	SE	S			
Chris Pepper	3-May-23	evw 132	8:09 AM	PIWO	Pileated Woodpecker	<i>Dryocopus pileatus</i>	1	100	N	S			
Chris Pepper	3-May-23	evw 132	8:09 AM	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1	50		H			
Chris Pepper	3-May-23	evw 132	8:09 AM	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	50		S			
Chris Pepper	3-May-23	evw 133	8:23 AM	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	2	0		H			

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Project # 25-11682

Observer	Date	Survey Location	Survey Start Time	Species Code	Common Name	Scientific Name	#	Distance (m)	Bearing	Behaviour	Pass Height (m)	Pass Direction	Comments
Chris Pepper	3-May-23	evw 133	8:23 AM	WIWR	Winter Wren	<i>Troglodytes hiemalis</i>	1	100		S			
Chris Pepper	3-May-23	evw 133	8:23 AM	PAWA	Palm Warbler	<i>Setophaga palmarum</i>	4	0		S			
Chris Pepper	3-May-23	evw 133	8:23 AM	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1	0		H			
Chris Pepper	3-May-23	evw 133	8:23 AM	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	2	0		H			
Chris Pepper	3-May-23	evw 133	8:23 AM	SPGR	Spruce Grouse	<i>Canachites canadensis</i>	1	0		D			
Chris Pepper	3-May-23	evw 135	8:38 AM	NOFL	Northern Flicker	<i>Colaptes auratus</i>	1	100		H			
Chris Pepper	3-May-23	evw 135	8:38 AM	SPGR	Spruce Grouse	<i>Canachites canadensis</i>	1	100		H			
Chris Pepper	3-May-23	evw 135	8:38 AM	RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1	100		S			
Chris Pepper	3-May-23	evw 135	8:38 AM	RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1	100		S			
Chris Pepper	3-May-23	evw 135	8:38 AM	PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1	100		S			
Chris Pepper	3-May-23	evw 135	8:38 AM	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1	50		S			
Chris Pepper	3-May-23	evw 134	8:54 AM	RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1	100	N	S			
Chris Pepper	3-May-23	evw 134	8:54 AM	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1	0		S			
Chris Pepper	3-May-23	evw 134	8:54 AM	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	2	0		H			
Chris Pepper	3-May-23	evw 134	8:54 AM	PAWA	Palm Warbler	<i>Setophaga palmarum</i>	2	0		S			
Chris Pepper	3-May-23	evw 134	8:54 AM	RUGR	Ruffed Grouse	<i>Bonasa umbellus</i>	1	0		D			
Chris Pepper	3-May-23	evw 134	8:54 AM	NOFL	Northern Flicker	<i>Colaptes auratus</i>	1	100		H			
Chris Pepper	3-May-23	evw 134	8:54 AM	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1	0		H			
Chris Pepper	3-May-23	evw 134	8:54 AM	DOWO	Downy Woodpecker	<i>Dryobates pubescens</i>	1	50		H			
Chris Pepper	3-May-23	evw 134	8:54 AM	PIWO	Pileated Woodpecker	<i>Dryocopus pileatus</i>	1	100		H			
Chris Pepper	3-May-23	evw 111	9:32 AM	RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1	50	E	S			
Chris Pepper	3-May-23	evw 111	9:32 AM	NOFL	Northern Flicker	<i>Colaptes auratus</i>	1	100		H			
Chris Pepper	7-May-23	evw 174	6:16 AM	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	2	0		S			
Chris Pepper	7-May-23	evw 174	6:16 AM	SPGR	Spruce Grouse	<i>Canachites canadensis</i>	4	0		H			
Chris Pepper	7-May-23	evw 174	6:16 AM	HETH	Hermit Thrush	<i>Catharus guttatus</i>	2	100		S			
Chris Pepper	7-May-23	evw 174	6:16 AM	PAWA	Palm Warbler	<i>Setophaga palmarum</i>	2	0		S			
Chris Pepper	7-May-23	evw 174	6:16 AM	NOFL	Northern Flicker	<i>Colaptes auratus</i>	1	100		H			
Chris Pepper	7-May-23	evw 174	6:16 AM	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	3	100		H			
Chris Pepper	7-May-23	evw 174	6:16 AM	AMGO	American Goldfinch	<i>Spinus tristis</i>	1	0		H			
Chris Pepper	7-May-23	evw 174	6:16 AM	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	0		S			
Chris Pepper	7-May-23	evw 174	6:16 AM	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1	100		S			
Chris Pepper	7-May-23	evw 173	6:38 AM	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	3	100		S			
Chris Pepper	7-May-23	evw 173	6:38 AM	RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1	0	NE	S			
Chris Pepper	7-May-23	evw 173	6:38 AM	HETH	Hermit Thrush	<i>Catharus guttatus</i>	3	50		S			
Chris Pepper	7-May-23	evw 173	6:38 AM	BOCH	Boreal Chickadee	<i>Poecile hudsonicus</i>	1	50	W	H			
Chris Pepper	7-May-23	evw 173	6:38 AM	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	2	0		S			
Chris Pepper	7-May-23	evw 173	6:38 AM	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	2	100		H			
Chris Pepper	7-May-23	evw 173	6:38 AM	RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1	100	N	S			
Chris Pepper	7-May-23	evw 173	6:38 AM	RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1	100	SW	S			
Chris Pepper	7-May-23	evw 173	6:38 AM	SPGR	Spruce Grouse	<i>Canachites canadensis</i>	1	50		D			
Chris Pepper	7-May-23	evw 173	6:38 AM	CAGO	Canada Goose	<i>Branta canadensis</i>	2	500		X			
Chris Pepper	7-May-23	evw 173	6:38 AM	PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1	50		S			
Chris Pepper	7-May-23	evw 175	7:04 AM	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	3	0		S			
Chris Pepper	7-May-23	evw 175	7:04 AM	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	2	50		H			
Chris Pepper	7-May-23	evw 175	7:04 AM	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	2	0		S			
Chris Pepper	7-May-23	evw 175	7:04 AM	RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1	100	NE	S			
Chris Pepper	7-May-23	evw 175	7:04 AM	SWSP	Swamp Sparrow	<i>Melospiza georgiana</i>	1	50		S			
Chris Pepper	7-May-23	evw 175	7:04 AM	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	50		H			
Chris Pepper	7-May-23	evw 175	7:04 AM	CORA	Common Raven	<i>Corvus corax</i>	1	250		X			
Chris Pepper	7-May-23	evw 175	7:04 AM	AMRO	American Robin	<i>Turdus migratorius</i>	1	50		H			
Chris Pepper	7-May-23	evw 175	7:04 AM	HETH	Hermit Thrush	<i>Catharus guttatus</i>	3	50		S			
Chris Pepper	7-May-23	evw 175	7:04 AM	PAWA	Palm Warbler	<i>Setophaga palmarum</i>	2	50		H			
Chris Pepper	7-May-23	evw 175	7:04 AM	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	2	100		H			
Chris Pepper	7-May-23	evw 175	7:04 AM	RUGR	Ruffed Grouse	<i>Bonasa umbellus</i>	1	50		D			

Table 4: 2023 Spring Migration Point Count Survey Results - Harbour Hills Wind Project

Project # 25-11682

Observer	Date	Survey Location	Survey Start Time	Species Code	Common Name	Scientific Name	#	Distance (m)	Bearing	Behaviour	Pass Height (m)	Pass Direction	Comments
Chris Pepper	7-May-23	evw 175	7:04 AM	COLO	Common Loon	<i>Gavia immer</i>	1	500	W	X			
Chris Pepper	7-May-23	evw 175	7:04 AM	CAGO	Canada Goose	<i>Branta canadensis</i>	1	50		H			
Chris Pepper	7-May-23	evw 175	7:04 AM	BWHA	Broad-winged Hawk	<i>Buteo platypterus</i>	1	100		H			
Chris Pepper	7-May-23	evw 176	7:28 AM	PAWA	Palm Warbler	<i>Setophaga palmarum</i>	3	0		S			
Chris Pepper	7-May-23	evw 176	7:28 AM	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	2	0		S			
Chris Pepper	7-May-23	evw 176	7:28 AM	HETH	Hermit Thrush	<i>Catharus guttatus</i>	2	0		S			
Chris Pepper	7-May-23	evw 176	7:28 AM	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	1	250		H			
Chris Pepper	7-May-23	evw 176	7:28 AM	SPGR	Spruce Grouse	<i>Canachites canadensis</i>	1	0		D			
Chris Pepper	7-May-23	evw 176	7:28 AM	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1	50		S			
Chris Pepper	7-May-23	evw 176	7:28 AM	RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1	0		H			
Chris Pepper	7-May-23	evw 176	7:28 AM	SAVS	Savannah Sparrow	<i>Passerculus sandwichensis</i>	2	0	W	H			
Chris Pepper	7-May-23	evw 176	7:28 AM	SOSP	Song Sparrow	<i>Melospiza melodia</i>	1	100		S			
Chris Pepper	7-May-23	evw 176	7:28 AM	CAGO	Canada Goose	<i>Branta canadensis</i>	2	500		X			
Chris Pepper	7-May-23	evw 176	7:28 AM	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	2	0		H			
Chris Pepper	7-May-23	evw 176	7:28 AM	PUFI	Purple Finch	<i>Haemorhous purpureus</i>	1	100		H			
Chris Pepper	7-May-23	evw 177	7:44 AM	CAGO	Canada Goose	<i>Branta canadensis</i>	2	1000		X			
Chris Pepper	7-May-23	evw 177	7:44 AM	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	2	0		S			
Chris Pepper	7-May-23	evw 177	7:44 AM	NOFL	Northern Flicker	<i>Colaptes auratus</i>	1	250		H			
Chris Pepper	7-May-23	evw 177	7:44 AM	PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1	0		S			
Chris Pepper	7-May-23	evw 177	7:44 AM	COGR	Common Grackle	<i>Quiscalus quiscula</i>	2	500	NE	Flying	100	NW	
Chris Pepper	7-May-23	evw 177	7:44 AM	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	1	100		H			
Chris Pepper	7-May-23	evw 177	7:44 AM	ROPI	Rock Pigeon	<i>Columba livia</i>	2	100		X			
Chris Pepper	7-May-23	evw 177	7:44 AM	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1	0		H			
Chris Pepper	7-May-23	evw 177	7:44 AM	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1	0		H			
Chris Pepper	7-May-23	evw 177	7:44 AM	BRCR	Brown Creeper	<i>Certhia americana</i>	1	50		S			
Chris Pepper	7-May-23	evw 177	7:44 AM	PUFI	Purple Finch	<i>Haemorhous purpureus</i>	1	100		H			
Chris Pepper	7-May-23	evw 177	7:44 AM	RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1	100	S	S			
Chris Pepper	7-May-23	evw 169	8:08 AM	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	0		S			
Chris Pepper	7-May-23	evw 169	8:08 AM	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1	0		H			
Chris Pepper	7-May-23	evw 169	8:08 AM	AMRO	American Robin	<i>Turdus migratorius</i>	1	100		H			
Chris Pepper	7-May-23	evw 169	8:08 AM	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1	100		S			
Chris Pepper	7-May-23	evw 171	8:29 AM	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	0		S			
Chris Pepper	7-May-23	evw 171	8:29 AM	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	2	0		S			
Chris Pepper	7-May-23	evw 171	8:29 AM	RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1	0	S	S			
Chris Pepper	7-May-23	evw 171	8:29 AM	NOFL	Northern Flicker	<i>Colaptes auratus</i>	1	100		H			
Chris Pepper	7-May-23	evw 171	8:29 AM	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	2	100		S			
Chris Pepper	7-May-23	evw 171	8:29 AM	PUFI	Purple Finch	<i>Haemorhous purpureus</i>	1	100		H			
Chris Pepper	7-May-23	evw 195	8:43 AM	RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1	100	W	S			
Chris Pepper	7-May-23	evw 195	8:43 AM	RUGR	Ruffed Grouse	<i>Bonasa umbellus</i>	1	0		D			
Chris Pepper	7-May-23	evw 195	8:43 AM	PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1	50		S			
Chris Pepper	7-May-23	evw 195	8:43 AM	SWSP	Swamp Sparrow	<i>Melospiza georgiana</i>	1	0		H			
Chris Pepper	7-May-23	evw 195	8:43 AM	N/A	Thrush Sp.	<i>N/A</i>	1	0		N/A			SWTH or GCTH - observed dead
Chris Pepper	7-May-23	evw 195	8:43 AM	BCCH	Black-capped Chickadee	<i>Poecile atricapillus</i>	1	0		H			
Chris Pepper	7-May-23	evw 170	9:01 AM	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	3	0		S			
Chris Pepper	7-May-23	evw 170	9:01 AM	PUFI	Purple Finch	<i>Haemorhous purpureus</i>	1	50		S			
Chris Pepper	7-May-23	evw 170	9:01 AM	SPGR	Spruce Grouse	<i>Canachites canadensis</i>	2	0		D			
Chris Pepper	7-May-23	evw 170	9:01 AM	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1	0		H			
Chris Pepper	7-May-23	evw 170	9:01 AM	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	2	0		H			
Chris Pepper	7-May-23	evw 172	9:17 AM	RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1	0	W	S			
Chris Pepper	7-May-23	evw 172	9:17 AM	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	2	0		H			
Chris Pepper	7-May-23	evw 172	9:17 AM	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1	0		S			
Chris Pepper	7-May-23	evw 172	9:17 AM	HAWO	Hairy Woodpecker	<i>Dryobates villosus</i>	1	50		H			
Chris Pepper	7-May-23	evw 172	9:17 AM	PAWA	Palm Warbler	<i>Setophaga palmarum</i>	2	0		H			
Chris Pepper	7-May-23	evw 172	9:17 AM	NOFL	Northern Flicker	<i>Colaptes auratus</i>	1	100		H			

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Project # 25-11682

Observer	Date	Survey Location	Survey Start Time	Species Code	Common Name	Scientific Name	#	Distance (m)	Bearing	Behaviour	Pass Height (m)	Pass Direction	Comments
Chris Pepper	7-May-23	evw 172	9:17 AM	PUFI	Purple Finch	<i>Haemorhous purpureus</i>	1	100		H			
Chris Pepper	7-May-23	evw 168	9:52 AM	N/A	Woodpecker Sp.	N/A	1	100		H			
Chris Pepper	7-May-23	evw 168	9:52 AM	PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1	0		H			
Chris Pepper	7-May-23	evw 168	9:52 AM	NOFL	Northern Flicker	<i>Colaptes auratus</i>	1	250		H			
Chris Pepper	7-May-23	evw 168	9:52 AM	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1	50		S			
Chris Pepper	7-May-23	evw 168	9:52 AM	RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1	0	N	S			
Chris Pepper	7-May-23	evw 168	9:52 AM	PUFI	Purple Finch	<i>Haemorhous purpureus</i>	1	50		H			
Chris Pepper	7-May-23	evw 168	9:52 AM	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1	0		H			
Chris Pepper	7-May-23	evw 167	10:10 AM	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	2	0		S			
Chris Pepper	7-May-23	evw 167	10:10 AM	NOFL	Northern Flicker	<i>Colaptes auratus</i>	1	100		H			
Chris Pepper	7-May-23	evw 167	10:10 AM	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	2	50		S			
Chris Pepper	7-May-23	evw 167	10:10 AM	HETH	Hermit Thrush	<i>Catharus guttatus</i>	1	0		H			
Chris Pepper	7-May-23	evw 167	10:10 AM	RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1	0	W	S			
Chris Pepper	7-May-23	evw 167	10:10 AM	SPGR	Spruce Grouse	<i>Canachites canadensis</i>	1	0		D			
Chris Pepper	7-May-23	evw 167	10:10 AM	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	0		H			
Chris Pepper	7-May-23	evw 167	10:10 AM	BOCH	Boreal Chickadee	<i>Poecile hudsonicus</i>	1	50	E	H			
Chris Pepper	7-May-23	evw 164	10:24 AM	PAWA	Palm Warbler	<i>Setophaga palmarum</i>	3	0		S			
Chris Pepper	7-May-23	evw 164	10:24 AM	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	2	50		S			
Chris Pepper	7-May-23	evw 164	10:24 AM	AMGO	American Goldfinch	<i>Spinus tristis</i>	1	100		H			
Chris Pepper	7-May-23	evw 164	10:24 AM	RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1	50		S			
Chris Pepper	7-May-23	evw 164	10:24 AM	AMRO	American Robin	<i>Turdus migratorius</i>	1	100		S			
Chris Pepper	7-May-23	evw 164	10:24 AM	HETH	Hermit Thrush	<i>Catharus guttatus</i>	1	0		H			
Chris Pepper	7-May-23	evw 164	10:24 AM	CAGO	Canada Goose	<i>Branta canadensis</i>	1	500		X			
Chris Pepper	7-May-23	evw 164	10:24 AM	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1	0		S			
Chris Pepper	7-May-23	evw 164	10:24 AM	PUFI	Purple Finch	<i>Haemorhous purpureus</i>	1	0	E	Flying	50	W	
Chris Pepper	7-May-23	evw 164	10:24 AM	CORA	Common Raven	<i>Corvus corax</i>	1	500		S			
Chris Pepper	7-May-23	evw 164	10:24 AM	AMRO	American Robin	<i>Turdus migratorius</i>	1	250		S			
Chris Pepper	11-May-23	evw 187	7:34 AM	WIWR	Winter Wren	<i>Troglodytes hiemalis</i>	1	250		S			
Chris Pepper	11-May-23	evw 187	7:34 AM	CAGO	Canada Goose	<i>Branta canadensis</i>	1	500		X			
Chris Pepper	11-May-23	evw 187	7:34 AM	YBSA	Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>	1	100		H			
Chris Pepper	11-May-23	evw 187	7:34 AM	NOFL	Northern Flicker	<i>Colaptes auratus</i>	1	100		H			
Chris Pepper	11-May-23	evw 187	7:34 AM	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1	0		H			
Chris Pepper	11-May-23	evw 187	7:34 AM	COGR	Common Grackle	<i>Quiscalus quiscula</i>	1	100		H			
Chris Pepper	11-May-23	evw 187	7:34 AM	RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1	100	N	S			
Chris Pepper	11-May-23	evw 187	7:34 AM	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1	250		S			
Chris Pepper	11-May-23	evw 187	7:34 AM	AMRO	American Robin	<i>Turdus migratorius</i>	1	250		S			
Chris Pepper	11-May-23	evw 187	7:34 AM	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1	0		H			
Chris Pepper	11-May-23	evw 187	7:34 AM	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	0		H			
Chris Pepper	11-May-23	evw 187	7:34 AM	ABDU	American Black Duck	<i>Anas rubripes</i>	1	250		X			
Chris Pepper	11-May-23	evw 187	7:34 AM	PIWO	Pileated Woodpecker	<i>Dryocopus pileatus</i>	1	250		H			
Chris Pepper	14-May-23	evw 110	5:43 AM	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	2	0		S			
Chris Pepper	14-May-23	evw 110	5:43 AM	BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1	50		S			
Chris Pepper	14-May-23	evw 110	5:43 AM	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1	0		S			
Chris Pepper	14-May-23	evw 110	5:43 AM	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	1	100		H			
Chris Pepper	14-May-23	evw 110	5:43 AM	WIWR	Winter Wren	<i>Troglodytes hiemalis</i>	2	100		S			
Chris Pepper	14-May-23	evw 110	5:43 AM	PIWO	Pileated Woodpecker	<i>Dryocopus pileatus</i>	1	100		H			
Chris Pepper	14-May-23	evw 110	5:43 AM	AMRO	American Robin	<i>Turdus migratorius</i>	2	50		S			
Chris Pepper	14-May-23	evw 110	5:43 AM	BOCH	Boreal Chickadee	<i>Poecile hudsonicus</i>	1	0	NW	H			
Chris Pepper	14-May-23	evw 110	5:43 AM	HETH	Hermit Thrush	<i>Catharus guttatus</i>	1	100		S			
Chris Pepper	14-May-23	evw 110	5:43 AM	OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	1	50		S			
Chris Pepper	14-May-23	evw 110	5:43 AM	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1	50		H			
Chris Pepper	14-May-23	evw 110	5:43 AM	RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1	100	E	S			
Chris Pepper	14-May-23	evw 110	5:43 AM	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1	50		S			
Chris Pepper	14-May-23	evw 110	5:43 AM	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	50		S			

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Project # 25-11682

Observer	Date	Survey Location	Survey Start Time	Species Code	Common Name	Scientific Name	#	Distance (m)	Bearing	Behaviour	Pass Height (m)	Pass Direction	Comments
Chris Pepper	14-May-23	evw 112	5:59 AM	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1	50		S			
Chris Pepper	14-May-23	evw 112	5:59 AM	HETH	Hermit Thrush	<i>Catharus guttatus</i>	1	50		H			
Chris Pepper	14-May-23	evw 112	5:59 AM	AMRO	American Robin	<i>Turdus migratorius</i>	2	100		S			
Chris Pepper	14-May-23	evw 112	5:59 AM	BOCH	Boreal Chickadee	<i>Poecile hudsonicus</i>	1	0	W	H			
Chris Pepper	14-May-23	evw 112	5:59 AM	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1	0		S			
Chris Pepper	14-May-23	evw 112	5:59 AM	BCCH	Black-capped Chickadee	<i>Poecile atricapillus</i>	1	0		H			
Chris Pepper	14-May-23	evw 112	5:59 AM	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1	50		S			
Chris Pepper	14-May-23	evw 112	5:59 AM	WIWR	Winter Wren	<i>Troglodytes hiemalis</i>	1	100		S			
Chris Pepper	14-May-23	evw 112	5:59 AM	PAWA	Palm Warbler	<i>Setophaga palmarum</i>	2	0		S			
Chris Pepper	14-May-23	evw 112	5:59 AM	BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	2	50		S			
Chris Pepper	14-May-23	evw 112	5:59 AM	YBSA	Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>	1	100		H			
Chris Pepper	14-May-23	evw 112	5:59 AM	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	1	50		S			
Chris Pepper	14-May-23	evw 112	5:59 AM	PUFI	Purple Finch	<i>Haemorhous purpureus</i>	1	50		S			
Chris Pepper	14-May-23	evw 112	5:59 AM	HAWO	Hairy Woodpecker	<i>Dryobates villosus</i>	1	100		H			
Chris Pepper	14-May-23	evw 112	5:59 AM	NOFL	Northern Flicker	<i>Colaptes auratus</i>	1	100		H			
Chris Pepper	14-May-23	evw 112	5:59 AM	RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1	0	NW	H			
Chris Pepper	14-May-23	evw 112	5:59 AM	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1	50		S			
Chris Pepper	14-May-23	evw 112	5:59 AM	OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	1	100		S			
Chris Pepper	14-May-23	evw 116	6:26 AM	OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	3	50		S			
Chris Pepper	14-May-23	evw 116	6:26 AM	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1	50		S			
Chris Pepper	14-May-23	evw 116	6:26 AM	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	2	50		S			
Chris Pepper	14-May-23	evw 116	6:26 AM	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	1	500		X			
Chris Pepper	14-May-23	evw 116	6:26 AM	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	2	0		S			
Chris Pepper	14-May-23	evw 116	6:26 AM	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	3	0		S			
Chris Pepper	14-May-23	evw 116	6:26 AM	RUGR	Ruffed Grouse	<i>Bonasa umbellus</i>	1	0		D			
Chris Pepper	14-May-23	evw 116	6:26 AM	BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1	100		S			
Chris Pepper	14-May-23	evw 116	6:26 AM	BTBW	Black-throated Blue Warbler	<i>Setophaga caerulescens</i>	1	100		S			
Chris Pepper	14-May-23	evw 116	6:26 AM	YBSA	Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>	1	100		H			
Chris Pepper	14-May-23	evw 116	6:26 AM	PUFI	Purple Finch	<i>Haemorhous purpureus</i>	1	100		S			
Chris Pepper	14-May-23	evw 116	6:26 AM	FOSP	Fox Sparrow	<i>Passerella iliaca</i>	1	0		S			Male singing at this location last round as well. hesitant to label as "probable nester" due to location
Chris Pepper	14-May-23	evw 116	6:26 AM	WIWR	Winter Wren	<i>Troglodytes hiemalis</i>	1	0		S			
Chris Pepper	14-May-23	evw 116	6:26 AM	RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1	100	NW	S			
Chris Pepper	14-May-23	evw 116	6:26 AM	NOFL	Northern Flicker	<i>Colaptes auratus</i>	1	100		H			
Chris Pepper	14-May-23	evw 116	6:26 AM	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1	100		S			
Chris Pepper	14-May-23	evw 190	6:40 AM	PAWA	Palm Warbler	<i>Setophaga palmarum</i>	2	0		S			
Chris Pepper	14-May-23	evw 190	6:40 AM	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	2	0		S			
Chris Pepper	14-May-23	evw 190	6:40 AM	NOFL	Northern Flicker	<i>Colaptes auratus</i>	2	0		H			
Chris Pepper	14-May-23	evw 190	6:40 AM	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	2	0		S			
Chris Pepper	14-May-23	evw 190	6:40 AM	HETH	Hermit Thrush	<i>Catharus guttatus</i>	1	0		H			
Chris Pepper	14-May-23	evw 190	6:40 AM	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1	50		S			
Chris Pepper	14-May-23	evw 190	6:40 AM	RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1	100	W	S			
Chris Pepper	14-May-23	evw 190	6:40 AM	BOCH	Boreal Chickadee	<i>Poecile hudsonicus</i>	2	50	N	H			
Chris Pepper	14-May-23	evw 190	6:40 AM	YBSA	Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>	1	100		H			
Chris Pepper	14-May-23	evw 190	6:40 AM	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	2	50		S			
Chris Pepper	14-May-23	evw 190	6:40 AM	PUFI	Purple Finch	<i>Haemorhous purpureus</i>	2	50		S			
Chris Pepper	14-May-23	evw 190	6:40 AM	HAWO	Hairy Woodpecker	<i>Dryobates villosus</i>	1	50		H			
Chris Pepper	14-May-23	evw 190	6:40 AM	BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1	50		S			
Chris Pepper	14-May-23	evw 190	6:40 AM	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1	50		S			
Chris Pepper	14-May-23	evw 190	6:40 AM	AMGO	American Goldfinch	<i>Spinus tristis</i>	1	50		H			
Chris Pepper	14-May-23	evw 190	6:40 AM	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	50		H			
Chris Pepper	14-May-23	evw 190	6:40 AM	RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1	100	N	S			
Chris Pepper	14-May-23	evw 190	6:40 AM	PIWO	Pileated Woodpecker	<i>Dryocopus pileatus</i>	1	100		H			
Chris Pepper	14-May-23	evw 190	6:40 AM	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1	100		H			

Table 4: 2023 Spring Migration Point Count Survey Results - Harbour Hills Wind Project

Project # 25-11682

Observer	Date	Survey Location	Survey Start Time	Species Code	Common Name	Scientific Name	#	Distance (m)	Bearing	Behaviour	Pass Height (m)	Pass Direction	Comments
Chris Pepper	14-May-23	evw 115	6:52 AM	NAWA	Nashville Warbler	<i>Leiothlypis ruficapilla</i>	1	0		S			
Chris Pepper	14-May-23	evw 115	6:52 AM	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1	0		S			
Chris Pepper	14-May-23	evw 115	6:52 AM	AMGO	American Goldfinch	<i>Spinus tristis</i>	1	0		H			
Chris Pepper	14-May-23	evw 115	6:52 AM	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	2	50		S			
Chris Pepper	14-May-23	evw 115	6:52 AM	PAWA	Palm Warbler	<i>Setophaga palmarum</i>	3	0		S			
Chris Pepper	14-May-23	evw 115	6:52 AM	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1	0		S			
Chris Pepper	14-May-23	evw 115	6:52 AM	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	1	50		S			
Chris Pepper	14-May-23	evw 115	6:52 AM	BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1	100		S			
Chris Pepper	14-May-23	evw 115	6:52 AM	RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1	100	NE	S			
Chris Pepper	14-May-23	evw 115	6:52 AM	NOFL	Northern Flicker	<i>Colaptes auratus</i>	1	100		H			
Chris Pepper	14-May-23	evw 115	6:52 AM	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1	0		S			
Chris Pepper	14-May-23	evw 115	6:52 AM	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1	100		S			
Chris Pepper	14-May-23	evw 115	6:52 AM	HETH	Hermit Thrush	<i>Catharus guttatus</i>	1	50		H			
Chris Pepper	14-May-23	evw 114	7:06 AM	FOSP	Fox Sparrow	<i>Passerella iliaca</i>	1	100	NE	S			
Chris Pepper	14-May-23	evw 114	7:06 AM	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	2	50		S			
Chris Pepper	14-May-23	evw 114	7:06 AM	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1	100		S			
Chris Pepper	14-May-23	evw 114	7:06 AM	EVGR	Evening Grosbeak	<i>Coccothraustes vespertinus</i>	1	100	NE	H			
Chris Pepper	14-May-23	evw 114	7:06 AM	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	2	100		S			
Chris Pepper	14-May-23	evw 114	7:06 AM	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1	50		S			
Chris Pepper	14-May-23	evw 114	7:06 AM	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1	50		S			
Chris Pepper	14-May-23	evw 114	7:06 AM	NOFL	Northern Flicker	<i>Colaptes auratus</i>	1	100		S			
Chris Pepper	14-May-23	evw 114	7:06 AM	PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1	50		S			
Chris Pepper	14-May-23	evw 114	7:06 AM	NAWA	Nashville Warbler	<i>Leiothlypis ruficapilla</i>	1	0		S			
Chris Pepper	14-May-23	evw 114	7:06 AM	PUFI	Purple Finch	<i>Haemorhous purpureus</i>	1	100		H			
Chris Pepper	14-May-23	evw 114	7:06 AM	OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	1	100		S			
Chris Pepper	14-May-23	evw 113	6:21 AM	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	0		H			
Chris Pepper	14-May-23	evw 113	6:21 AM	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1	0		H			
Chris Pepper	14-May-23	evw 113	6:21 AM	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1	0		S			
Chris Pepper	14-May-23	evw 113	6:21 AM	PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1	0		S			
Chris Pepper	14-May-23	evw 113	6:21 AM	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1	50		S			
Chris Pepper	14-May-23	evw 113	6:21 AM	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	1	0		H			
Chris Pepper	14-May-23	evw 113	6:21 AM	AMRO	American Robin	<i>Turdus migratorius</i>	1	100		S			
Chris Pepper	14-May-23	evw 113	6:21 AM	NOFL	Northern Flicker	<i>Colaptes auratus</i>	1	100		H			
Chris Pepper	14-May-23	evw 113	6:21 AM	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1	100		S			
Chris Pepper	14-May-23	evw 113	6:21 AM	PUFI	Purple Finch	<i>Haemorhous purpureus</i>	1	0		H			
Chris Pepper	14-May-23	evw 122	6:44 AM	BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1	0		S			
Chris Pepper	14-May-23	evw 122	6:44 AM	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	1	0		S			
Chris Pepper	14-May-23	evw 122	6:44 AM	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1	50		S			
Chris Pepper	14-May-23	evw 122	6:44 AM	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	2	0		P			
Chris Pepper	14-May-23	evw 122	6:44 AM	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	2	50		S			
Chris Pepper	14-May-23	evw 122	6:44 AM	AMRO	American Robin	<i>Turdus migratorius</i>	1	100		S			
Chris Pepper	14-May-23	evw 122	6:44 AM	PUFI	Purple Finch	<i>Haemorhous purpureus</i>	1	50		H			
Chris Pepper	14-May-23	evw 122	6:44 AM	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1	100		S			
Chris Pepper	14-May-23	evw 122	6:44 AM	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1	0		H			
Chris Pepper	14-May-23	evw 121	6:58 AM	WBNU	White-breasted Nuthatch	<i>Sitta carolinensis</i>	1	0	NW	H			
Chris Pepper	14-May-23	evw 121	6:58 AM	NOPA	Northern Parula	<i>Setophaga americana</i>	1	50		S			
Chris Pepper	14-May-23	evw 121	6:58 AM	RTHA	Red-tailed Hawk	<i>Buteo jamaicensis</i>	1	50		H			
Chris Pepper	14-May-23	evw 121	6:58 AM	OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	4	50		S			
Chris Pepper	14-May-23	evw 121	6:58 AM	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1	0		S			
Chris Pepper	14-May-23	evw 121	6:58 AM	BRCR	Brown Creeper	<i>Certhia americana</i>	1	0		H			
Chris Pepper	14-May-23	evw 121	6:58 AM	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1	0		H			
Chris Pepper	14-May-23	evw 121	6:58 AM	YBSA	Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>	1	50		H			
Chris Pepper	14-May-23	evw 121	6:58 AM	BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	2	100		S			
Chris Pepper	14-May-23	evw 121	6:58 AM	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1	50		S			

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Project # 25-11682

Observer	Date	Survey Location	Survey Start Time	Species Code	Common Name	Scientific Name	#	Distance (m)	Bearing	Behaviour	Pass Height (m)	Pass Direction	Comments
Chris Pepper	14-May-23	evw 121	6:58 AM	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	2	0		S			
Chris Pepper	14-May-23	evw 121	6:58 AM	DOWO	Downy Woodpecker	<i>Dryobates pubescens</i>	1	0		H			
Chris Pepper	14-May-23	evw 121	6:58 AM	PUFI	Purple Finch	<i>Haemorhous purpureus</i>	2	50		H			
Chris Pepper	14-May-23	evw 121	6:58 AM	LEFL	Least Flycatcher	<i>Empidonax minimus</i>	1	50		S			
Chris Pepper	14-May-23	evw 121	6:58 AM	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1	50		S			
Chris Pepper	14-May-23	evw 121	6:58 AM	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	50		S			
Chris Pepper	14-May-23	evw 120	8:13 AM	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	2	0		S			
Chris Pepper	14-May-23	evw 120	8:13 AM	HETH	Hermit Thrush	<i>Catharus guttatus</i>	2	50		H			
Chris Pepper	14-May-23	evw 120	8:13 AM	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1	0		S			
Chris Pepper	14-May-23	evw 120	8:13 AM	PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1	0		S			
Chris Pepper	14-May-23	evw 120	8:13 AM	RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1	50	N	S			
Chris Pepper	14-May-23	evw 120	8:13 AM	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1	50		S			
Chris Pepper	14-May-23	evw 120	8:13 AM	BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1	0		S			
Chris Pepper	14-May-23	evw 120	8:13 AM	AMRO	American Robin	<i>Turdus migratorius</i>	1	100		S			
Chris Pepper	14-May-23	evw 120	8:13 AM	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	0		S			
Chris Pepper	14-May-23	evw 120	8:13 AM	YBSA	Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>	1	100		H			
Chris Pepper	14-May-23	evw 119	8:26 AM	RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1	100	W	S			
Chris Pepper	14-May-23	evw 119	8:26 AM	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	2	50		S			
Chris Pepper	14-May-23	evw 119	8:26 AM	PUFI	Purple Finch	<i>Haemorhous purpureus</i>	1	0		S			
Chris Pepper	14-May-23	evw 119	8:26 AM	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	2	0		S			
Chris Pepper	14-May-23	evw 119	8:26 AM	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	0		H			
Chris Pepper	14-May-23	evw 119	8:26 AM	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	2	50		S			
Chris Pepper	14-May-23	evw 119	8:26 AM	PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1	50		S			
Chris Pepper	14-May-23	evw 123	8:41 AM	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1	50		S			
Chris Pepper	14-May-23	evw 123	8:41 AM	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1	50		S			
Chris Pepper	14-May-23	evw 123	8:41 AM	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	0		S			
Chris Pepper	14-May-23	evw 123	8:41 AM	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1	50		S			
Chris Pepper	14-May-23	evw 123	8:41 AM	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1	50		H			
Chris Pepper	14-May-23	evw 123	8:41 AM	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1	0		S			
Chris Pepper	14-May-23	evw 123	8:41 AM	HETH	Hermit Thrush	<i>Catharus guttatus</i>	1	100		H			
Chris Pepper	14-May-23	evw 123	8:41 AM	TRES	Tree Swallow	<i>Tachycineta bicolor</i>	1	50		X			
Chris Pepper	14-May-23	evw 123	8:41 AM	BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1	100		S			
Chris Pepper	14-May-23	evw 123	8:41 AM	RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1	100		S			
Chris Pepper	14-May-23	evw 128	8:54 AM	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	2	0		S			
Chris Pepper	14-May-23	evw 128	8:54 AM	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1	0		S			
Chris Pepper	14-May-23	evw 128	8:54 AM	NOFL	Northern Flicker	<i>Colaptes auratus</i>	1	100		H			
Chris Pepper	14-May-23	evw 128	8:54 AM	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1	50		S			
Chris Pepper	14-May-23	evw 128	8:54 AM	RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1	100	SW	S			
Chris Pepper	14-May-23	evw 128	8:54 AM	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	2	100		S			
Chris Pepper	14-May-23	evw 128	8:54 AM	RUGR	Ruffed Grouse	<i>Bonasa umbellus</i>	1	0		D			
Chris Pepper	14-May-23	evw 128	8:54 AM	PAWA	Palm Warbler	<i>Setophaga palmarum</i>	2	50		S			
Chris Pepper	14-May-23	evw 128	8:54 AM	PUFI	Purple Finch	<i>Haemorhous purpureus</i>	1	100		S			
Chris Pepper	14-May-23	evw 128	8:54 AM	BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1	100		S			
Chris Pepper	14-May-23	evw 128	8:54 AM	RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1	100	N	S			
Chris Pepper	14-May-23	evw 126	9:09 AM	WIWR	Winter Wren	<i>Troglodytes hiemalis</i>	1	0		S			
Chris Pepper	14-May-23	evw 126	9:09 AM	PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1	0		S			
Chris Pepper	14-May-23	evw 126	9:09 AM	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	2	50		S			
Chris Pepper	14-May-23	evw 126	9:09 AM	PUFI	Purple Finch	<i>Haemorhous purpureus</i>	2	100		S			
Chris Pepper	14-May-23	evw 126	9:09 AM	RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1	0	SW	S			
Chris Pepper	14-May-23	evw 126	9:09 AM	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	2	0		S			
Chris Pepper	14-May-23	evw 126	9:09 AM	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1	100		S			
Chris Pepper	14-May-23	evw 126	9:09 AM	AMGO	American Goldfinch	<i>Spinus tristis</i>	1	0	W	Flying	-50	E	
Chris Pepper	14-May-23	evw 126	9:09 AM	BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1	100		S			
Chris Pepper	14-May-23	evw 125	9:22 AM	RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1	100	W	S			

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Observer	Date	Survey Location	Survey Start Time	Species Code	Common Name	Scientific Name	#	Distance (m)	Bearing	Behaviour	Pass Height (m)	Pass Direction	Comments
Chris Pepper	14-May-23	evw 125	9:22 AM	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1	50		S			
Chris Pepper	14-May-23	evw 125	9:22 AM	NOFL	Northern Flicker	<i>Colaptes auratus</i>	1	100		H			
Chris Pepper	14-May-23	evw 125	9:22 AM	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1	0		S			
Chris Pepper	14-May-23	evw 125	9:22 AM	BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1	100		S			
Chris Pepper	14-May-23	evw 125	9:22 AM	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1	50		S			
Chris Pepper	14-May-23	evw 125	9:22 AM	CORA	Common Raven	<i>Corvus corax</i>	1	1000		H			
Chris Pepper	14-May-23	evw 125	9:22 AM	WIWR	Winter Wren	<i>Troglodytes hiemalis</i>	1	100		S			
Chris Pepper	14-May-23	evw 125	9:22 AM	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1	50		S			
Chris Pepper	14-May-23	evw 125	9:22 AM	PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1	50		S			
Chris Pepper	14-May-23	evw 124	9:35 AM	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1	50		S			
Chris Pepper	14-May-23	evw 124	9:35 AM	TRES	Tree Swallow	<i>Tachycineta bicolor</i>	2	50		X			
Chris Pepper	14-May-23	evw 124	9:35 AM	PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1	50		S			
Chris Pepper	14-May-23	evw 124	9:35 AM	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1	50		S			
Chris Pepper	14-May-23	evw 127	9:48 AM	OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	1	100		S			
Chris Pepper	14-May-23	evw 127	9:48 AM	NOFL	Northern Flicker	<i>Colaptes auratus</i>	1	50		H			
Chris Pepper	14-May-23	evw 127	9:48 AM	TRES	Tree Swallow	<i>Tachycineta bicolor</i>	1	0		H			
Chris Pepper	14-May-23	evw 127	9:48 AM	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1	100		S			
Chris Pepper	14-May-23	evw 127	9:48 AM	AMRO	American Robin	<i>Turdus migratorius</i>	1	100		S			
Chris Pepper	14-May-23	evw 127	9:48 AM	HETH	Hermit Thrush	<i>Catharus guttatus</i>	1	50		H			
Chris Pepper	14-May-23	evw 139	10:12 AM	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	2	0		H			
Chris Pepper	14-May-23	evw 139	10:12 AM	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1	0		S			
Chris Pepper	14-May-23	evw 139	10:12 AM	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	0		S			
Chris Pepper	14-May-23	evw 139	10:12 AM	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	1	0		S			
Chris Pepper	14-May-23	evw 139	10:12 AM	PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1	0		S			
Chris Pepper	14-May-23	evw 139	10:12 AM	NOFL	Northern Flicker	<i>Colaptes auratus</i>	1	50		H			
Chris Pepper	14-May-23	evw 139	10:12 AM	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1	0		H			
Chris Pepper	14-May-23	evw 139	10:12 AM	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1	0		S			
Chris Pepper	14-May-23	evw 140	10:24 AM	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	2	50		S			
Chris Pepper	14-May-23	evw 140	10:24 AM	PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1	0		S			
Chris Pepper	14-May-23	evw 140	10:24 AM	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1	0		S			
Chris Pepper	14-May-23	evw 140	10:24 AM	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1	0		S			
Chris Pepper	14-May-23	evw 141	10:37 AM	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	3	0		S			
Chris Pepper	14-May-23	evw 141	10:37 AM	PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1	50		S			
Chris Pepper	14-May-23	evw 141	10:37 AM	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1	0		S			
Chris Pepper	14-May-23	evw 141	10:37 AM	HETH	Hermit Thrush	<i>Catharus guttatus</i>	1	50		H			
Chris Pepper	14-May-23	evw 141	10:37 AM	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1	0		S			
Chris Pepper	14-May-23	evw 141	10:37 AM	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1	0		H			
Chris Pepper	14-May-23	evw 142	10:50 AM	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	1	0		S			
Chris Pepper	14-May-23	evw 142	10:50 AM	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	2	50		H			
Chris Pepper	14-May-23	evw 142	10:50 AM	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	2	0		H			
Chris Pepper	14-May-23	evw 142	10:50 AM	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1	0		S			
Chris Pepper	14-May-23	evw 142	10:50 AM	DCCO	Double-crested Cormorant	<i>Nannopterum auritum</i>	1	3000	N	Flying	-50	N/A	Went in for landing near devil lake
Chris Pepper	14-May-23	evw 142	10:50 AM	TRES	Tree Swallow	<i>Tachycineta bicolor</i>	2	50	SE	Flying	-50	N	
Chris Pepper	14-May-23	evw 142	10:50 AM	PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1	0		S			
Chris Pepper	14-May-23	evw 152	11:03 AM	PAWA	Palm Warbler	<i>Setophaga palmarum</i>	2	0		S			
Chris Pepper	14-May-23	evw 152	11:03 AM	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1	0		S			
Chris Pepper	14-May-23	evw 152	11:03 AM	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1	0		H			
Chris Pepper	14-May-23	evw 152	11:03 AM	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1	100		S			
Chris Pepper	14-May-23	evw 152	11:03 AM	RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1	100	NW	S			
Chris Pepper	14-May-23	evw 152	11:03 AM	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1	50		S			
Chris Pepper	14-May-23	evw 152	11:03 AM	GRYE	Greater Yellowlegs	<i>Tringa melanoleuca</i>	1	500	W	S			
Chris Pepper	14-May-23	evw 152	11:03 AM	CAJA	Canada Jay	<i>Perisoreus canadensis</i>	1	0		H			
Chris Pepper	14-May-23	evw 152	11:03 AM	DCCO	Double-crested Cormorant	<i>Nannopterum auritum</i>	1	0	SE	Flying	-50	NW	
Chris Pepper	14-May-23	evw 152	11:03 AM	COLO	Common Loon	<i>Gavia immer</i>	2	1000	W	Flying	250	S	

Table 4: 2023 Spring Migration Point Count Survey Results - Harbour Hills Wind Project

Project # 25-11682

Observer	Date	Survey Location	Survey Start Time	Species Code	Common Name	Scientific Name	#	Distance (m)	Bearing	Behaviour	Pass Height (m)	Pass Direction	Comments
Chris Pepper	16-May-23	evw 105	5:47 AM	AMRE	American Redstart	<i>Setophaga ruticilla</i>	1	0		S			
Chris Pepper	16-May-23	evw 105	5:47 AM	AMRO	American Robin	<i>Turdus migratorius</i>	1	100		S			
Chris Pepper	16-May-23	evw 105	5:47 AM	BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	2	50		S			
Chris Pepper	16-May-23	evw 105	5:47 AM	NOPA	Northern Parula	<i>Setophaga americana</i>	2	50		S			
Chris Pepper	16-May-23	evw 105	5:47 AM	NOWA	Northern Waterthrush	<i>Parkesia noveboracensis</i>	1	100		S			
Chris Pepper	16-May-23	evw 105	5:47 AM	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1	50		S			
Chris Pepper	16-May-23	evw 105	5:47 AM	RUGR	Ruffed Grouse	<i>Bonasa umbellus</i>	1	50		D			
Chris Pepper	16-May-23	evw 105	5:47 AM	OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	1	100		S			
Chris Pepper	16-May-23	evw 105	5:47 AM	BCCH	Black-capped Chickadee	<i>Poecile atricapillus</i>	2	50		S			
Chris Pepper	16-May-23	evw 105	5:47 AM	YBSA	Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>	1	100		H			
Chris Pepper	16-May-23	evw 105	5:47 AM	BLBW	Blackburnian Warbler	<i>Setophaga fusca</i>	1	50		S			
Chris Pepper	16-May-23	evw 105	5:47 AM	HETH	Hermit Thrush	<i>Catharus guttatus</i>	1	50		S			
Chris Pepper	16-May-23	evw 105	5:47 AM	WIWR	Winter Wren	<i>Troglodytes hiemalis</i>	1	100		S			
Chris Pepper	16-May-23	evw 105	5:47 AM	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1	0		S			
Chris Pepper	16-May-23	evw 105	5:47 AM	LEFL	Least Flycatcher	<i>Empidonax minimus</i>	1	50		S			
Chris Pepper	16-May-23	evw 105	5:47 AM	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1	0		H			
Chris Pepper	16-May-23	evw 117	6:16 AM	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	2	0		S			
Chris Pepper	16-May-23	evw 117	6:16 AM	GRYE	Greater Yellowlegs	<i>Tringa melanoleuca</i>	1	250	N	S			
Chris Pepper	16-May-23	evw 117	6:16 AM	PAWA	Palm Warbler	<i>Setophaga palmarum</i>	2	0		S			
Chris Pepper	16-May-23	evw 117	6:16 AM	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	2	0		S			
Chris Pepper	16-May-23	evw 117	6:16 AM	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1	50		S			
Chris Pepper	16-May-23	evw 117	6:16 AM	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	2	0		S			
Chris Pepper	16-May-23	evw 117	6:16 AM	NOFL	Northern Flicker	<i>Colaptes auratus</i>	1	50		H			
Chris Pepper	16-May-23	evw 117	6:16 AM	BLPW	Blackpoll Warbler	<i>Setophaga striata</i>	1	0		S			
Chris Pepper	16-May-23	evw 117	6:16 AM	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1	50		S			
Chris Pepper	16-May-23	evw 117	6:16 AM	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	50		H			
Chris Pepper	16-May-23	evw 117	6:16 AM	RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1	50	NE	S			
Chris Pepper	16-May-23	evw 117	6:16 AM	COGR	Common Grackle	<i>Quiscalus quiscula</i>	1	100	NE	Flying	-50	SE	
Chris Pepper	16-May-23	evw 117	6:16 AM	WIWR	Winter Wren	<i>Troglodytes hiemalis</i>	1	100		S			
Chris Pepper	16-May-23	evw 117	6:16 AM	CORA	Common Raven	<i>Corvus corax</i>	1	500		X			
Chris Pepper	16-May-23	evw 117	6:16 AM	YBSA	Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>	2	100		H			
Chris Pepper	16-May-23	evw 117	6:16 AM	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1	250		S			
Chris Pepper	16-May-23	evw 117	6:16 AM	RUGR	Ruffed Grouse	<i>Bonasa umbellus</i>	1	0		D			
Chris Pepper	16-May-23	evw 117	6:16 AM	NOWA	Northern Waterthrush	<i>Parkesia noveboracensis</i>	1	250		S			
Chris Pepper	16-May-23	evw 117	6:16 AM	RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1	100	E	S			
Chris Pepper	16-May-23	evw 117	6:16 AM	BOCH	Boreal Chickadee	<i>Poecile hudsonicus</i>	1	50	E	H			
Chris Pepper	16-May-23	evw 133	6:35 AM	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	2	50		S			
Chris Pepper	16-May-23	evw 133	6:35 AM	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	0		S			
Chris Pepper	16-May-23	evw 133	6:35 AM	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	2	50		S			
Chris Pepper	16-May-23	evw 133	6:35 AM	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1	0		S			
Chris Pepper	16-May-23	evw 133	6:35 AM	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	1	50		S			
Chris Pepper	16-May-23	evw 133	6:35 AM	BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	2	50		S			
Chris Pepper	16-May-23	evw 133	6:35 AM	COGR	Common Grackle	<i>Quiscalus quiscula</i>	2	50		H			
Chris Pepper	16-May-23	evw 133	6:35 AM	WIWR	Winter Wren	<i>Troglodytes hiemalis</i>	1	100		S			
Chris Pepper	16-May-23	evw 133	6:35 AM	PUFI	Purple Finch	<i>Haemorhous purpureus</i>	1	50		H			
Chris Pepper	16-May-23	evw 136	6:53 AM	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	3	50		S			
Chris Pepper	16-May-23	evw 136	6:53 AM	NAWA	Nashville Warbler	<i>Leiothlypis ruficapilla</i>	1	0		S			
Chris Pepper	16-May-23	evw 136	6:53 AM	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	2	0		S			
Chris Pepper	16-May-23	evw 136	6:53 AM	RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1	0		S			
Chris Pepper	16-May-23	evw 136	6:53 AM	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1	0		S			
Chris Pepper	16-May-23	evw 136	6:53 AM	BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1	100		S			
Chris Pepper	16-May-23	evw 136	6:53 AM	HETH	Hermit Thrush	<i>Catharus guttatus</i>	2	50		H			
Chris Pepper	16-May-23	evw 136	6:53 AM	PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1	0		S			
Chris Pepper	16-May-23	evw 136	6:53 AM	PIWO	Pileated Woodpecker	<i>Dryocopus pileatus</i>	2	250		H			

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Project # 25-11682

Observer	Date	Survey Location	Survey Start Time	Species Code	Common Name	Scientific Name	#	Distance (m)	Bearing	Behaviour	Pass Height (m)	Pass Direction	Comments
Chris Pepper	16-May-23	evw 136	6:53 AM	NOPA	Northern Parula	<i>Setophaga americana</i>	1	50		S			
Chris Pepper	16-May-23	evw 136	6:53 AM	AMRO	American Robin	<i>Turdus migratorius</i>	1	100		H			
Chris Pepper	16-May-23	evw 136	6:53 AM	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1	50		S			
Chris Pepper	16-May-23	evw 136	6:53 AM	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	1	100		H			
Chris Pepper	16-May-23	evw 136	6:53 AM	OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	1	100		S			
Chris Pepper	16-May-23	evw 136	6:53 AM	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1	50		S			
Chris Pepper	16-May-23	evw 136	6:53 AM	PUFI	Purple Finch	<i>Haemorhous purpureus</i>	1	50	NW	Flying	50	E	
Chris Pepper	16-May-23	evw 136	6:53 AM	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	1	50		S			
Chris Pepper	16-May-23	evw 136	6:53 AM	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1	0		A			
Chris Pepper	16-May-23	evw 137	7:07 AM	RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1	50	NE	S			
Chris Pepper	16-May-23	evw 137	7:07 AM	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	3	0		S			
Chris Pepper	16-May-23	evw 137	7:07 AM	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	2	50		S			
Chris Pepper	16-May-23	evw 137	7:07 AM	PAWA	Palm Warbler	<i>Setophaga palmarum</i>	2	50		S			
Chris Pepper	16-May-23	evw 137	7:07 AM	HETH	Hermit Thrush	<i>Catharus guttatus</i>	1	0		H			
Chris Pepper	16-May-23	evw 137	7:07 AM	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1	0		S			
Chris Pepper	16-May-23	evw 137	7:07 AM	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1	0		S			
Chris Pepper	16-May-23	evw 137	7:07 AM	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1	100		S			
Chris Pepper	16-May-23	evw 137	7:07 AM	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1	50		S			
Chris Pepper	16-May-23	evw 137	7:07 AM	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	2	50		S			
Chris Pepper	16-May-23	evw 137	7:07 AM	RUGR	Ruffed Grouse	<i>Bonasa umbellus</i>	1	50		H			
Chris Pepper	16-May-23	evw 137	7:07 AM	YBSA	Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>	1	100		H			
Chris Pepper	16-May-23	evw 138	7:21 AM	GRYE	Greater Yellowlegs	<i>Tringa melanoleuca</i>	1	100	E	S			
Chris Pepper	16-May-23	evw 138	7:21 AM	BOCH	Boreal Chickadee	<i>Poecile hudsonicus</i>	2	0	E	H			
Chris Pepper	16-May-23	evw 138	7:21 AM	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	2	0		S			
Chris Pepper	16-May-23	evw 138	7:21 AM	RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1	100	E	S			
Chris Pepper	16-May-23	evw 138	7:21 AM	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1	0		S			
Chris Pepper	16-May-23	evw 138	7:21 AM	TRES	Tree Swallow	<i>Tachycineta bicolor</i>	3	0	E	Flying	-50	W	
Chris Pepper	16-May-23	evw 138	7:21 AM	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	1	50		S			
Chris Pepper	16-May-23	evw 138	7:21 AM	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1	50		S			
Chris Pepper	16-May-23	evw 138	7:21 AM	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1	50		S			
Chris Pepper	16-May-23	evw 138	7:21 AM	PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1	50		S			
Chris Pepper	16-May-23	evw 138	7:21 AM	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1	0		H			
Chris Pepper	16-May-23	evw 141	7:41 AM	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	3	0		S			
Chris Pepper	16-May-23	evw 141	7:41 AM	OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	2	0		S			
Chris Pepper	16-May-23	evw 141	7:41 AM	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1	0		S			
Chris Pepper	16-May-23	evw 141	7:41 AM	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1	50		S			
Chris Pepper	16-May-23	evw 141	7:41 AM	NOFL	Northern Flicker	<i>Colaptes auratus</i>	1	50		H			
Chris Pepper	16-May-23	evw 141	7:41 AM	HETH	Hermit Thrush	<i>Catharus guttatus</i>	1	50		H			
Chris Pepper	16-May-23	evw 141	7:41 AM	AMRO	American Robin	<i>Turdus migratorius</i>	1	100		H			
Chris Pepper	16-May-23	evw 141	7:41 AM	YBSA	Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>	1	250		S			
Chris Pepper	16-May-23	evw 141	7:41 AM	PUFI	Purple Finch	<i>Haemorhous purpureus</i>	1	0		S			
Chris Pepper	16-May-23	evw 141	7:41 AM	BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1	100		S			
Chris Pepper	16-May-23	evw 141	7:41 AM	RUGR	Ruffed Grouse	<i>Bonasa umbellus</i>	1	0		D			
Chris Pepper	16-May-23	evw 141	7:41 AM	NAWA	Nashville Warbler	<i>Leiothlypis ruficapilla</i>	1	50		S			
Chris Pepper	16-May-23	evw 144	7:55 AM	HETH	Hermit Thrush	<i>Catharus guttatus</i>	1	0		H			
Chris Pepper	16-May-23	evw 144	7:55 AM	PUFI	Purple Finch	<i>Haemorhous purpureus</i>	1	100		S			
Chris Pepper	16-May-23	evw 144	7:55 AM	NAWA	Nashville Warbler	<i>Leiothlypis ruficapilla</i>	2	0		S			
Chris Pepper	16-May-23	evw 144	7:55 AM	RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1	100	NW	S			
Chris Pepper	16-May-23	evw 144	7:55 AM	N/A	Woodpecker Sp.	N/A	1	100		H			
Chris Pepper	16-May-23	evw 144	7:55 AM	PIWO	Pileated Woodpecker	<i>Dryocopus pileatus</i>	1	250		H			
Chris Pepper	16-May-23	evw 144	7:55 AM	NOWA	Northern Waterthrush	<i>Parkesia noveboracensis</i>	1	100		S			
Chris Pepper	16-May-23	evw 144	7:55 AM	PAWA	Palm Warbler	<i>Setophaga palmarum</i>	2	0		S			
Chris Pepper	16-May-23	evw 144	7:55 AM	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	2	50		S			
Chris Pepper	16-May-23	evw 144	7:55 AM	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	50		S			

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Project # 25-11682

Observer	Date	Survey Location	Survey Start Time	Species Code	Common Name	Scientific Name	#	Distance (m)	Bearing	Behaviour	Pass Height (m)	Pass Direction	Comments
Chris Pepper	16-May-23	evw 144	7:55 AM	LEFL	Least Flycatcher	<i>Empidonax minimus</i>	1	100		S			
Chris Pepper	16-May-23	evw 144	7:55 AM	HAWO	Hairy Woodpecker	<i>Dryobates villosus</i>	1	100		H			
Chris Pepper	16-May-23	evw 146	8:14 AM	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1	0		S			
Chris Pepper	16-May-23	evw 146	8:14 AM	RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1	100		S			
Chris Pepper	16-May-23	evw 146	8:14 AM	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	0		S			
Chris Pepper	16-May-23	evw 146	8:14 AM	BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1	100		S			
Chris Pepper	16-May-23	evw 146	8:14 AM	HAWO	Hairy Woodpecker	<i>Dryobates villosus</i>	1	100		H			
Chris Pepper	16-May-23	evw 146	8:14 AM	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1	50		S			
Chris Pepper	16-May-23	evw 146	8:14 AM	HETH	Hermit Thrush	<i>Catharus guttatus</i>	1	0		H			
Chris Pepper	16-May-23	evw 146	8:14 AM	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1	0		S			
Chris Pepper	16-May-23	evw 146	8:14 AM	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1	0		S			
Chris Pepper	16-May-23	evw 146	8:14 AM	AMGO	American Goldfinch	<i>Spinus tristis</i>	1	0		H			
Chris Pepper	16-May-23	evw 149	8:33 AM	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	2	0		S			
Chris Pepper	16-May-23	evw 149	8:33 AM	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1	0		S			
Chris Pepper	16-May-23	evw 149	8:33 AM	RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1	100	W	S			
Chris Pepper	16-May-23	evw 149	8:33 AM	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1	0		S			
Chris Pepper	16-May-23	evw 149	8:33 AM	WIWR	Winter Wren	<i>Troglodytes hiemalis</i>	1	10		S			
Chris Pepper	16-May-23	evw 149	8:33 AM	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	50		S			
Chris Pepper	16-May-23	evw 149	8:33 AM	OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	1	100		S			
Chris Pepper	16-May-23	evw 146	8:49 AM	NOWA	Northern Waterthrush	<i>Parkesia noveboracensis</i>	50	100		S			
Chris Pepper	16-May-23	evw 146	8:49 AM	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	2	50		S			
Chris Pepper	16-May-23	evw 146	8:49 AM	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	2	0		S			
Chris Pepper	16-May-23	evw 146	8:49 AM	RUGR	Ruffed Grouse	<i>Bonasa umbellus</i>	1	0		D			
Chris Pepper	16-May-23	evw 146	8:49 AM	WIWR	Winter Wren	<i>Troglodytes hiemalis</i>	1	100		S			
Chris Pepper	16-May-23	evw 146	8:49 AM	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	2	100		S			
Chris Pepper	16-May-23	evw 146	8:49 AM	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1	50		S			
Chris Pepper	16-May-23	evw 146	8:49 AM	OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	1	100		S			
Chris Pepper	16-May-23	evw 146	8:49 AM	PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1	0		S			
Chris Pepper	16-May-23	evw 146	8:49 AM	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	1	100		H			
Chris Pepper	16-May-23	evw 146	8:49 AM	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1	50		S			
Chris Pepper	16-May-23	evw 147	9:05 AM	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1	0		S			
Chris Pepper	16-May-23	evw 147	9:05 AM	HAWO	Hairy Woodpecker	<i>Dryobates villosus</i>	1	50		H			
Chris Pepper	16-May-23	evw 147	9:05 AM	AMRO	American Robin	<i>Turdus migratorius</i>	1	100		H			
Chris Pepper	16-May-23	evw 147	9:05 AM	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	1	50		H			
Chris Pepper	16-May-23	evw 147	9:05 AM	RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1	100	N	S			
Chris Pepper	16-May-23	evw 147	9:05 AM	OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	2	50		S			
Chris Pepper	16-May-23	evw 147	9:05 AM	BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	2	100		S			
Chris Pepper	16-May-23	evw 147	9:05 AM	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1	50		S			
Chris Pepper	16-May-23	evw 147	9:05 AM	PUFL	Purple Finch	<i>Haemorhous purpureus</i>	1	50		H			
Chris Pepper	16-May-23	evw 147	9:05 AM	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1	50		S			
Chris Pepper	16-May-23	evw 147	9:05 AM	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	1	500		X			
Chris Pepper	16-May-23	evw 147	9:05 AM	YBSA	Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>	1	250		H			
Chris Pepper	16-May-23	evw 147	9:05 AM	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1	100		S			
Chris Pepper	16-May-23	evw 145	9:22 AM	NOWA	Northern Waterthrush	<i>Parkesia noveboracensis</i>	1	100		S			
Chris Pepper	16-May-23	evw 145	9:22 AM	BCCH	Black-capped Chickadee	<i>Poecile atricapillus</i>	1	0		S			
Chris Pepper	16-May-23	evw 145	9:22 AM	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1	50		S			
Chris Pepper	16-May-23	evw 145	9:22 AM	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	2	0		S			
Chris Pepper	16-May-23	evw 145	9:22 AM	OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	1	100		S			
Chris Pepper	16-May-23	evw 145	9:22 AM	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1	0		S			
Chris Pepper	16-May-23	evw 145	9:22 AM	BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1	100		S			
Chris Pepper	16-May-23	evw 145	9:22 AM	PUFI	Purple Finch	<i>Haemorhous purpureus</i>	1	50		S			
Chris Pepper	16-May-23	evw 145	9:22 AM	PIWO	Pileated Woodpecker	<i>Dryocopus pileatus</i>	1	100		S			
Chris Pepper	16-May-23	evw 145	9:22 AM	NOPA	Northern Parula	<i>Setophaga americana</i>	1	0		S			
Chris Pepper	16-May-23	evw 150	9:39 AM	NOPA	Northern Parula	<i>Setophaga americana</i>	1	0		S			

Table 4: 2023 Spring Migration Point Count Survey Results - Harbour Hills Wind Project

Project # 25-11682

Observer	Date	Survey Location	Survey Start Time	Species Code	Common Name	Scientific Name	#	Distance (m)	Bearing	Behaviour	Pass Height (m)	Pass Direction	Comments
Chris Pepper	16-May-23	evw 150	9:39 AM	RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1	0	S	S			
Chris Pepper	16-May-23	evw 150	9:39 AM	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	3	0		S			
Chris Pepper	16-May-23	evw 150	9:39 AM	WIWR	Winter Wren	<i>Troglodytes hiemalis</i>	1	100		S			
Chris Pepper	16-May-23	evw 150	9:39 AM	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	2	0		S			
Chris Pepper	16-May-23	evw 150	9:39 AM	BCCH	Black-capped Chickadee	<i>Poecile atricapillus</i>	1	50		S			
Chris Pepper	16-May-23	evw 150	9:39 AM	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	0		S			
Chris Pepper	16-May-23	evw 150	9:39 AM	PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1	50		S			
Chris Pepper	16-May-23	evw 150	9:39 AM	BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1	0		S			
Chris Pepper	16-May-23	evw 150	9:39 AM	RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1	0	SW	S			
Chris Pepper	16-May-23	evw 150	9:39 AM	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1	50		S			
Chris Pepper	16-May-23	evw 150	9:39 AM	AMGO	American Goldfinch	<i>Spinus tristis</i>	1	0		H			
Chris Pepper	16-May-23	evw 150	9:39 AM	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	1	50		S			
Chris Pepper	16-May-23	evw 150	9:39 AM	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	2	0		S			
Chris Pepper	16-May-23	evw 151	9:53 AM	AMGO	American Goldfinch	<i>Spinus tristis</i>	2	0	N	Flying	-50	S	
Chris Pepper	16-May-23	evw 151	9:53 AM	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1	50		S			
Chris Pepper	16-May-23	evw 151	9:53 AM	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	2	0		S			
Chris Pepper	16-May-23	evw 151	9:53 AM	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	3	0		S			
Chris Pepper	16-May-23	evw 151	9:53 AM	OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	2	50		S			
Chris Pepper	16-May-23	evw 151	9:53 AM	BRCR	Brown Creeper	<i>Certhia americana</i>	1	50		S			
Chris Pepper	16-May-23	evw 151	9:53 AM	BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1	100		S			
Chris Pepper	16-May-23	evw 151	9:53 AM	PUFI	Purple Finch	<i>Haemorhous purpureus</i>	1	0	N	Flying	-50	SW	
Chris Pepper	16-May-23	evw 134	10:12 AM	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1	50		S			
Chris Pepper	16-May-23	evw 134	10:12 AM	PAWA	Palm Warbler	<i>Setophaga palmarum</i>	2	0		S			
Chris Pepper	16-May-23	evw 134	10:12 AM	PUFI	Purple Finch	<i>Haemorhous purpureus</i>	1	0		S			
Chris Pepper	16-May-23	evw 134	10:12 AM	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1	0		S			
Chris Pepper	16-May-23	evw 134	10:12 AM	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	1	50		S			
Chris Pepper	16-May-23	evw 134	10:12 AM	AMGO	American Goldfinch	<i>Spinus tristis</i>	1	0		H			
Chris Pepper	16-May-23	evw 134	10:12 AM	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1	0		S			
Chris Pepper	16-May-23	evw 134	10:12 AM	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1	0		S			
Chris Pepper	16-May-23	evw 134	10:12 AM	RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1	50	N	S			
Chris Pepper	16-May-23	evw 134	10:12 AM	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1	0		S			
Chris Pepper	18-May-23	evw 173	6:10 AM	SWSP	Swamp Sparrow	<i>Melospiza georgiana</i>	1	50		S			
Chris Pepper	18-May-23	evw 173	6:10 AM	RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1	0	N	S			
Chris Pepper	18-May-23	evw 173	6:10 AM	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	4	0		S			
Chris Pepper	18-May-23	evw 173	6:10 AM	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	2	0		S			
Chris Pepper	18-May-23	evw 173	6:10 AM	MODO	Mourning Dove	<i>Zenaida macroura</i>	1	100		S			
Chris Pepper	18-May-23	evw 173	6:10 AM	CAJA	Canada Jay	<i>Perisoreus canadensis</i>	1	100		S			
Chris Pepper	18-May-23	evw 173	6:10 AM	RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1	50	S	S			
Chris Pepper	18-May-23	evw 173	6:10 AM	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	2	0		S			
Chris Pepper	18-May-23	evw 173	6:10 AM	LISP	Lincoln's Sparrow	<i>Melospiza lincolnii</i>	1	50		S			
Chris Pepper	18-May-23	evw 173	6:10 AM	CAGO	Canada Goose	<i>Branta canadensis</i>	2	0		H			
Chris Pepper	18-May-23	evw 173	6:10 AM	PUFI	Purple Finch	<i>Haemorhous purpureus</i>	1	50		S			
Chris Pepper	18-May-23	evw 173	6:10 AM	BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1	100		S			
Chris Pepper	18-May-23	evw 173	6:10 AM	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1	100		S			
Chris Pepper	18-May-23	evw 173	6:10 AM	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1	50		S			
Chris Pepper	18-May-23	evw 173	6:10 AM	HETH	Hermit Thrush	<i>Catharus guttatus</i>	1	50		H			
Chris Pepper	18-May-23	evw 173	6:10 AM	PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1	50		S			
Chris Pepper	18-May-23	evw 173	6:10 AM	NAWA	Nashville Warbler	<i>Leiothlypis ruficapilla</i>	1	0		S			
Chris Pepper	18-May-23	evw 173	6:10 AM	SWTH	Swainson's Thrush	<i>Catharus ustulatus</i>	1	50		H			
Chris Pepper	18-May-23	evw 173	6:10 AM	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1	0		H			
Chris Pepper	18-May-23	evw 175	6:36 AM	HETH	Hermit Thrush	<i>Catharus guttatus</i>	1	50		H			
Chris Pepper	18-May-23	evw 175	6:36 AM	CORA	Common Raven	<i>Corvus corax</i>	1	500		H			
Chris Pepper	18-May-23	evw 175	6:36 AM	BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1	100		S			
Chris Pepper	18-May-23	evw 175	6:36 AM	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1	50		S			

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Project # 25-11682

Observer	Date	Survey Location	Survey Start Time	Species Code	Common Name	Scientific Name	#	Distance (m)	Bearing	Behaviour	Pass Height (m)	Pass Direction	Comments
Chris Pepper	18-May-23	evw 175	6:36 AM	RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1	50	NE	S			
Chris Pepper	18-May-23	evw 175	6:36 AM	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	0		S			
Chris Pepper	18-May-23	evw 175	6:36 AM	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	1	50		S			
Chris Pepper	18-May-23	evw 175	6:36 AM	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	2	50		S			
Chris Pepper	18-May-23	evw 175	6:36 AM	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	2	0		S			
Chris Pepper	18-May-23	evw 175	6:36 AM	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1	0		S			
Chris Pepper	18-May-23	evw 175	6:36 AM	PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1	0		S			
Chris Pepper	18-May-23	evw 175	6:36 AM	RUGR	Ruffed Grouse	<i>Bonasa umbellus</i>	1	0		D			
Chris Pepper	18-May-23	evw 175	6:36 AM	CAGO	Canada Goose	<i>Branta canadensis</i>	2	500		X			
Chris Pepper	18-May-23	evw 175	6:36 AM	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1	0		H			
Chris Pepper	18-May-23	evw 175	6:36 AM	AMGO	American Goldfinch	<i>Spinus tristis</i>	1	0		H			
Chris Pepper	18-May-23	evw 176	6:51 AM	GRCA	Grey Catbird	<i>Dumetella carolinensis</i>	1	0		X			
Chris Pepper	18-May-23	evw 176	6:51 AM	HETH	Hermit Thrush	<i>Catharus guttatus</i>	2	0		H			
Chris Pepper	18-May-23	evw 176	6:51 AM	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	2	50		S			
Chris Pepper	18-May-23	evw 176	6:51 AM	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1	50		S			
Chris Pepper	18-May-23	evw 176	6:51 AM	LISP	Lincoln's Sparrow	<i>Melospiza lincolni</i>	2	100		S			
Chris Pepper	18-May-23	evw 176	6:51 AM	PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1	50		S			
Chris Pepper	18-May-23	evw 176	6:51 AM	RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1	100	N	S			
Chris Pepper	18-May-23	evw 176	6:51 AM	PUFI	Purple Finch	<i>Haemorhous purpureus</i>	1	50		H			
Chris Pepper	18-May-23	evw 176	6:51 AM	BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1	100		S			
Chris Pepper	18-May-23	evw 176	6:51 AM	GRYE	Greater Yellowlegs	<i>Tringa melanoleuca</i>	1	250	W	H			
Chris Pepper	18-May-23	evw 176	6:51 AM	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	1	0		X			
Chris Pepper	18-May-23	evw 176	6:51 AM	BBWO	Black-backed Woodpecker	<i>Picoides arcticus</i>	1	100	W	H			
Chris Pepper	18-May-23	evw 176	6:51 AM	SWSP	Swamp Sparrow	<i>Melospiza georgiana</i>	1	0		S			
Chris Pepper	18-May-23	evw 176	6:51 AM	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	2	50		S			
Chris Pepper	18-May-23	evw 177	7:07 AM	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	2	0		S			
Chris Pepper	18-May-23	evw 177	7:07 AM	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1	0		S			
Chris Pepper	18-May-23	evw 177	7:07 AM	PUFI	Purple Finch	<i>Haemorhous purpureus</i>	2	0		S			
Chris Pepper	18-May-23	evw 177	7:07 AM	BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1	0		S			
Chris Pepper	18-May-23	evw 177	7:07 AM	HETH	Hermit Thrush	<i>Catharus guttatus</i>	1	0		H			
Chris Pepper	18-May-23	evw 177	7:07 AM	AMRO	American Robin	<i>Turdus migratorius</i>	1	100		S			
Chris Pepper	18-May-23	evw 177	7:07 AM	NOPA	Northern Parula	<i>Setophaga americana</i>	1	0		S			
Chris Pepper	18-May-23	evw 177	7:07 AM	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1	0		S			
Chris Pepper	18-May-23	evw 177	7:07 AM	NAWA	Nashville Warbler	<i>Leiothlypis ruficapilla</i>	1	50		S			
Chris Pepper	18-May-23	evw 177	7:07 AM	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1	100		S			
Chris Pepper	18-May-23	evw 177	7:07 AM	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	1	0		S			
Chris Pepper	18-May-23	evw 169	7:38 AM	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	1	50		S			
Chris Pepper	18-May-23	evw 169	7:38 AM	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1	50		S			
Chris Pepper	18-May-23	evw 169	7:38 AM	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1	50		S			
Chris Pepper	18-May-23	evw 169	7:38 AM	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	1	50		S			
Chris Pepper	18-May-23	evw 169	7:38 AM	PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1	0		S			
Chris Pepper	18-May-23	evw 169	7:38 AM	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1	0		H			
Chris Pepper	18-May-23	evw 169	7:38 AM	DCCO	Double-crested Cormorant	<i>Nannopterum auritum</i>	1	0	E	Flying	50	W	
Chris Pepper	18-May-23	evw 169	7:38 AM	PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1	50		S			
Chris Pepper	18-May-23	evw 169	7:38 AM	PUFI	Purple Finch	<i>Haemorhous purpureus</i>	1	50		S			
Chris Pepper	18-May-23	evw 172	8:01 AM	SWTH	Swainson's Thrush	<i>Catharus ustulatus</i>	2	50		S			
Chris Pepper	18-May-23	evw 172	8:01 AM	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	3	0		S			
Chris Pepper	18-May-23	evw 172	8:01 AM	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1	0		S			
Chris Pepper	18-May-23	evw 172	8:01 AM	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	0		S			
Chris Pepper	18-May-23	evw 172	8:01 AM	PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1	0		S			
Chris Pepper	18-May-23	evw 172	8:01 AM	BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1	0		S			
Chris Pepper	18-May-23	evw 172	8:01 AM	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1	0		S			
Chris Pepper	18-May-23	evw 172	8:01 AM	AMGO	American Goldfinch	<i>Spinus tristis</i>	1	0	NW	Flying	-50	S	
Chris Pepper	18-May-23	evw 172	8:01 AM	PUFI	Purple Finch	<i>Haemorhous purpureus</i>	1	0		S			

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Project # 25-11682

Observer	Date	Survey Location	Survey Start Time	Species Code	Common Name	Scientific Name	#	Distance (m)	Bearing	Behaviour	Pass Height (m)	Pass Direction	Comments
Chris Pepper	18-May-23	evw 172	8:01 AM	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1	50		S			
Chris Pepper	18-May-23	evw 170	8:16 AM	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	2	0		S			
Chris Pepper	18-May-23	evw 170	8:16 AM	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1	0		H			
Chris Pepper	18-May-23	evw 170	8:16 AM	BOCH	Boreal Chickadee	<i>Poecile hudsonicus</i>	2	0	S	S			
Chris Pepper	18-May-23	evw 170	8:16 AM	RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1	100	NE	H			
Chris Pepper	18-May-23	evw 170	8:16 AM	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	0		H			
Chris Pepper	18-May-23	evw 170	8:16 AM	CAJA	Canada Jay	<i>Perisoreus canadensis</i>	1	0		H			
Chris Pepper	18-May-23	evw 170	8:16 AM	CORA	Common Raven	<i>Corvus corax</i>	1	100		X			
Chris Pepper	18-May-23	evw 170	8:16 AM	PUFI	Purple Finch	<i>Haemorhous purpureus</i>	1	0		H			
Chris Pepper	18-May-23	evw 195	8:32 AM	PAWA	Palm Warbler	<i>Setophaga palmarum</i>	2	50		S			
Chris Pepper	18-May-23	evw 195	8:32 AM	RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1	100	N	S			
Chris Pepper	18-May-23	evw 195	8:32 AM	NOFL	Northern Flicker	<i>Colaptes auratus</i>	1	100		H			
Chris Pepper	18-May-23	evw 195	8:32 AM	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	1	50		S			
Chris Pepper	18-May-23	evw 195	8:32 AM	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1	50		S			
Chris Pepper	18-May-23	evw 195	8:32 AM	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1	50		S			
Chris Pepper	18-May-23	evw 195	8:32 AM	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	0		S			
Chris Pepper	18-May-23	evw 195	8:32 AM	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1	0		S			
Chris Pepper	18-May-23	evw 195	8:32 AM	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1	50		S			
Chris Pepper	18-May-23	evw 195	8:32 AM	BCCH	Black-capped Chickadee	<i>Poecile atricapillus</i>	1	50		S			
Chris Pepper	18-May-23	evw 195	8:32 AM	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1	50		S			
Chris Pepper	18-May-23	evw 195	8:32 AM	HETH	Hermit Thrush	<i>Catharus guttatus</i>	1	0		H			
Chris Pepper	18-May-23	evw 195	8:32 AM	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	2	0		H			
Chris Pepper	18-May-23	evw 195	8:32 AM	CAJA	Canada Jay	<i>Perisoreus canadensis</i>	1	50		H			
Chris Pepper	18-May-23	evw 171	8:48 AM	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	2	0		S			
Chris Pepper	18-May-23	evw 171	8:48 AM	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	0		H			
Chris Pepper	18-May-23	evw 171	8:48 AM	RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1	100	SW	S			
Chris Pepper	18-May-23	evw 171	8:48 AM	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	2	0		S			
Chris Pepper	18-May-23	evw 171	8:48 AM	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1	0		S			
Chris Pepper	18-May-23	evw 171	8:48 AM	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	1	0		S			
Chris Pepper	18-May-23	evw 171	8:48 AM	NOFL	Northern Flicker	<i>Colaptes auratus</i>	1	0		H			
Chris Pepper	18-May-23	evw 171	8:48 AM	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1	0		H			
Chris Pepper	18-May-23	evw 168	9:32 AM	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	1	0		S			
Chris Pepper	18-May-23	evw 168	9:32 AM	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1	50		S			
Chris Pepper	18-May-23	evw 168	9:32 AM	BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1	100		S			
Chris Pepper	18-May-23	evw 168	9:32 AM	BOCH	Boreal Chickadee	<i>Poecile hudsonicus</i>	1	0		H			
Chris Pepper	18-May-23	evw 168	9:32 AM	NAWA	Nashville Warbler	<i>Leiothlypis ruficapilla</i>	1	50		S			
Chris Pepper	18-May-23	evw 168	9:32 AM	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1	50		S			
Chris Pepper	18-May-23	evw 168	9:32 AM	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1	0		S			
Chris Pepper	18-May-23	evw 168	9:32 AM	RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1	100		S			
Chris Pepper	18-May-23	evw 168	9:32 AM	BCCH	Black-capped Chickadee	<i>Poecile atricapillus</i>	2	50		S			
Chris Pepper	18-May-23	evw 168	9:32 AM	NOFL	Northern Flicker	<i>Colaptes auratus</i>	1	50		H			
Chris Pepper	18-May-23	evw 167	9:47 AM	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	2	0		P			
Chris Pepper	18-May-23	evw 167	9:47 AM	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1	0		S			
Chris Pepper	18-May-23	evw 167	9:47 AM	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	0		S			
Chris Pepper	18-May-23	evw 167	9:47 AM	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	2	0		S			
Chris Pepper	18-May-23	evw 167	9:47 AM	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	1	0		S			
Chris Pepper	18-May-23	evw 164	10:02 AM	RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1	100	NE	S			
Chris Pepper	18-May-23	evw 164	10:02 AM	AMGO	American Goldfinch	<i>Spinus tristis</i>	1	0	N	Flying	-50	S	
Chris Pepper	18-May-23	evw 164	10:02 AM	PUFI	Purple Finch	<i>Haemorhous purpureus</i>	1	0	N	Flying	50	S	
Chris Pepper	18-May-23	evw 164	10:02 AM	BCCH	Black-capped Chickadee	<i>Poecile atricapillus</i>	1	0		S			
Chris Pepper	18-May-23	evw 164	10:02 AM	PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1	0		H			
Chris Pepper	18-May-23	evw 164	10:02 AM	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1	0		S			
Chris Pepper	18-May-23	evw 164	10:02 AM	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	1	0		S			
Chris Pepper	18-May-23	evw 164	10:02 AM	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	0		S			

Table 4: 2023 Spring Migration Point Count Survey Results - Harbour Hills Wind Project

Project # 25-11682

Observer	Date	Survey Location	Survey Start Time	Species Code	Common Name	Scientific Name	#	Distance (m)	Bearing	Behaviour	Pass Height (m)	Pass Direction	Comments
Chris Pepper	21-May-23	evw 108	5:06 AM	OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	3	0		S			
Chris Pepper	21-May-23	evw 108	5:06 AM	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1	50		S			
Chris Pepper	21-May-23	evw 108	5:06 AM	RUGR	Ruffed Grouse	<i>Bonasa umbellus</i>	1	0		D			
Chris Pepper	21-May-23	evw 108	5:06 AM	SWTH	Swainson's Thrush	<i>Catharus ustulatus</i>	1	100		S			
Chris Pepper	21-May-23	evw 108	5:06 AM	WIWR	Winter Wren	<i>Troglodytes hiemalis</i>	1	100		S			
Chris Pepper	21-May-23	evw 108	5:06 AM	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1	100		S			
Chris Pepper	21-May-23	evw 108	5:06 AM	BCCH	Black-capped Chickadee	<i>Poecile atricapillus</i>	1	100		S			
Chris Pepper	21-May-23	evw 108	5:06 AM	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1	50		S			
Chris Pepper	21-May-23	evw 108	5:06 AM	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1	50		S			
Chris Pepper	21-May-23	evw 108	5:06 AM	HETH	Hermit Thrush	<i>Catharus guttatus</i>	1	100		S			
Chris Pepper	21-May-23	evw 108	5:06 AM	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	1	50		S			
Chris Pepper	21-May-23	evw 108	5:06 AM	BRCR	Brown Creeper	<i>Certhia americana</i>	1	50		S			
Chris Pepper	21-May-23	evw 108	5:06 AM	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	2	50		S			
Chris Pepper	21-May-23	evw 108	5:06 AM	YBSA	Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>	1	50		S			
Chris Pepper	21-May-23	evw 109	5:24 AM	AMRE	American Redstart	<i>Setophaga ruticilla</i>	2	50		S			
Chris Pepper	21-May-23	evw 109	5:24 AM	WIWR	Winter Wren	<i>Troglodytes hiemalis</i>	2	0		S			
Chris Pepper	21-May-23	evw 109	5:24 AM	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	2	0		S			
Chris Pepper	21-May-23	evw 109	5:24 AM	OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	2	0		S			
Chris Pepper	21-May-23	evw 109	5:24 AM	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1	50		S			
Chris Pepper	21-May-23	evw 109	5:24 AM	PUFI	Purple Finch	<i>Haemorhous purpureus</i>	1	100		S			
Chris Pepper	21-May-23	evw 109	5:24 AM	RUGR	Ruffed Grouse	<i>Bonasa umbellus</i>	1	0		D			
Chris Pepper	21-May-23	evw 109	5:24 AM	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	2	0		S			
Chris Pepper	21-May-23	evw 109	5:24 AM	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	2	50		S			
Chris Pepper	21-May-23	evw 109	5:24 AM	HETH	Hermit Thrush	<i>Catharus guttatus</i>	1	100		S			
Chris Pepper	21-May-23	evw 109	5:24 AM	SWTH	Swainson's Thrush	<i>Catharus ustulatus</i>	1	50		S			
Chris Pepper	21-May-23	evw 109	5:24 AM	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	2	50		S			
Chris Pepper	21-May-23	evw 109	5:24 AM	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1	50		S			
Chris Pepper	21-May-23	evw 109	5:24 AM	BRCR	Brown Creeper	<i>Certhia americana</i>	1	0		H			
Chris Pepper	21-May-23	evw 109	5:24 AM	AMRO	American Robin	<i>Turdus migratorius</i>	1	100		H			
Chris Pepper	21-May-23	evw 109	5:24 AM	HAWO	Hairy Woodpecker	<i>Dryobates villosus</i>	1	50		H			
Chris Pepper	21-May-23	evw 109	5:24 AM	PUFI	Purple Finch	<i>Haemorhous purpureus</i>	1	100		S			
Chris Pepper	21-May-23	evw 109	5:24 AM	BLBW	Blackburnian Warbler	<i>Setophaga fusca</i>	1			S			
Chris Pepper	21-May-23	evw 111	5:50 AM	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	2	100		S			
Chris Pepper	21-May-23	evw 111	5:50 AM	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	2	50		S			
Chris Pepper	21-May-23	evw 111	5:50 AM	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	3	50		S			
Chris Pepper	21-May-23	evw 111	5:50 AM	PUFI	Purple Finch	<i>Haemorhous purpureus</i>	1	100		S			
Chris Pepper	21-May-23	evw 111	5:50 AM	BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1	50		S			
Chris Pepper	21-May-23	evw 111	5:50 AM	NOWA	Northern Waterthrush	<i>Parkesia noveboracensis</i>	1	100		S			
Chris Pepper	21-May-23	evw 111	5:50 AM	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	2	50		S			
Chris Pepper	21-May-23	evw 111	5:50 AM	AMRE	American Redstart	<i>Setophaga ruticilla</i>	1	50		S			
Chris Pepper	21-May-23	evw 111	5:50 AM	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	1	100		H			
Chris Pepper	21-May-23	evw 111	5:50 AM	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1	0		S			
Chris Pepper	21-May-23	evw 111	5:50 AM	OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	2	100		S			
Chris Pepper	21-May-23	evw 111	5:50 AM	NOPA	Northern Parula	<i>Setophaga americana</i>	1	100		S			
Chris Pepper	21-May-23	evw 111	5:50 AM	LEFL	Least Flycatcher	<i>Empidonax minimus</i>	2	100		S			
Chris Pepper	21-May-23	evw 111	5:50 AM	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1	100		S			
Chris Pepper	21-May-23	evw 111	5:50 AM	PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1	50		S			
Chris Pepper	21-May-23	evw 111	5:50 AM	WIWR	Winter Wren	<i>Troglodytes hiemalis</i>	1	100		S			
Chris Pepper	21-May-23	evw 111	5:50 AM	YBFL	Yellow-bellied Flycatcher	<i>Empidonax flaviventris</i>	1	50		S			
Chris Pepper	21-May-23	evw 111	5:50 AM	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1	50		S			
Chris Pepper	21-May-23	evw 114	6:12 AM	RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1	100	E	S			
Chris Pepper	21-May-23	evw 114	6:12 AM	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	2	50		S			
Chris Pepper	21-May-23	evw 114	6:12 AM	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	3	0		S			
Chris Pepper	21-May-23	evw 114	6:12 AM	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1	0		S			

Table 4: 2023 Spring Migration Point Count Survey Results - Harbour Hills Wind Project

Project # 25-11682

Observer	Date	Survey Location	Survey Start Time	Species Code	Common Name	Scientific Name	#	Distance (m)	Bearing	Behaviour	Pass Height (m)	Pass Direction	Comments
Chris Pepper	21-May-23	evw 114	6:12 AM	PAWA	Palm Warbler	<i>Setophaga palmarum</i>	2	50		S			
Chris Pepper	21-May-23	evw 114	6:12 AM	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	3	0		S			
Chris Pepper	21-May-23	evw 114	6:12 AM	LEFL	Least Flycatcher	<i>Empidonax minimus</i>	1	50		S			
Chris Pepper	21-May-23	evw 114	6:12 AM	NAWA	Nashville Warbler	<i>Leiothlypis ruficapilla</i>	2	0		S			
Chris Pepper	21-May-23	evw 114	6:12 AM	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1	50		S			
Chris Pepper	21-May-23	evw 114	6:12 AM	OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	1	50		S			
Chris Pepper	21-May-23	evw 114	6:12 AM	BCCH	Black-capped Chickadee	<i>Poecile atricapillus</i>	1	50		S			
Chris Pepper	21-May-23	evw 118	6:38 AM	BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1	50		S			
Chris Pepper	21-May-23	evw 118	6:38 AM	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	3	0		S			
Chris Pepper	21-May-23	evw 118	6:38 AM	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1	100		S			
Chris Pepper	21-May-23	evw 118	6:38 AM	OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	1	100		S			
Chris Pepper	21-May-23	evw 118	6:38 AM	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	2	0		S			
Chris Pepper	21-May-23	evw 118	6:38 AM	HETH	Hermit Thrush	<i>Catharus guttatus</i>	2	50		H			
Chris Pepper	21-May-23	evw 118	6:38 AM	WIWR	Winter Wren	<i>Troglodytes hiemalis</i>	1	100		S			
Chris Pepper	21-May-23	evw 118	6:38 AM	BLPW	Blackpoll Warbler	<i>Setophaga striata</i>	1	0		X			
Chris Pepper	21-May-23	evw 118	6:38 AM	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1	50		S			
Chris Pepper	21-May-23	evw 118	6:38 AM	BCCH	Black-capped Chickadee	<i>Poecile atricapillus</i>	1	100		S			
Chris Pepper	21-May-23	evw 118	6:38 AM	PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1	50		S			
Chris Pepper	21-May-23	evw 118	6:38 AM	PIWO	Pileated Woodpecker	<i>Dryocopus pileatus</i>	1	250		H			
Chris Pepper	21-May-23	evw 118	6:38 AM	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1	0		S			
Chris Pepper	21-May-23	evw 118	6:38 AM	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	0		H			
Chris Pepper	21-May-23	evw 118	6:38 AM	AMRO	American Robin	<i>Turdus migratorius</i>	1	100		H			
Chris Pepper	21-May-23	evw 123	6:52 AM	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	0		S			
Chris Pepper	21-May-23	evw 123	6:52 AM	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	2	0		S			
Chris Pepper	21-May-23	evw 123	6:52 AM	BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1	100		S			
Chris Pepper	21-May-23	evw 123	6:52 AM	EVGR	Evening Grosbeak	<i>Coccothraustes vespertinus</i>	1	0	N	H			
Chris Pepper	21-May-23	evw 123	6:52 AM	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	2	0		S			
Chris Pepper	21-May-23	evw 123	6:52 AM	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	3	50		S			
Chris Pepper	21-May-23	evw 123	6:52 AM	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	2	100		S			
Chris Pepper	21-May-23	evw 123	6:52 AM	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1	100		S			
Chris Pepper	21-May-23	evw 123	6:52 AM	PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1	100		S			
Chris Pepper	21-May-23	evw 123	6:52 AM	OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	1	100		S			
Chris Pepper	21-May-23	evw 124	7:07 AM	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	2	50		S			
Chris Pepper	21-May-23	evw 124	7:07 AM	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	2	50		S			
Chris Pepper	21-May-23	evw 124	7:07 AM	OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	1	100		S			
Chris Pepper	21-May-23	evw 124	7:07 AM	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1	0		S			
Chris Pepper	21-May-23	evw 124	7:07 AM	NAWA	Nashville Warbler	<i>Leiothlypis ruficapilla</i>	2	50		S			
Chris Pepper	21-May-23	evw 124	7:07 AM	AMRE	American Redstart	<i>Setophaga ruticilla</i>	1	50		S			
Chris Pepper	21-May-23	evw 124	7:07 AM	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1	100		S			
Chris Pepper	21-May-23	evw 124	7:07 AM	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1	50		S			
Chris Pepper	21-May-23	evw 124	7:07 AM	PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1	50		S			
Chris Pepper	21-May-23	evw 124	7:07 AM	AMRO	American Robin	<i>Turdus migratorius</i>	1	100		H			
Chris Pepper	21-May-23	evw 124	7:07 AM	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1	50		S			
Chris Pepper	21-May-23	evw 125	7:22 AM	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	2	50		S			
Chris Pepper	21-May-23	evw 125	7:22 AM	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	2	50		S			
Chris Pepper	21-May-23	evw 125	7:22 AM	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	2	0		S			
Chris Pepper	21-May-23	evw 125	7:22 AM	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	2	50		S			
Chris Pepper	21-May-23	evw 125	7:22 AM	BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1	100		S			
Chris Pepper	21-May-23	evw 125	7:22 AM	HETH	Hermit Thrush	<i>Catharus guttatus</i>	1	50		H			
Chris Pepper	21-May-23	evw 125	7:22 AM	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	2	100		S			
Chris Pepper	21-May-23	evw 125	7:22 AM	RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1	100	SW	S			
Chris Pepper	21-May-23	evw 125	7:22 AM	NAWA	Nashville Warbler	<i>Leiothlypis ruficapilla</i>	1	100		S			
Chris Pepper	21-May-23	evw 125	7:22 AM	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1	100		S			
Chris Pepper	21-May-23	evw 125	7:22 AM	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	2	50		H			

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Project # 25-11682

Observer	Date	Survey Location	Survey Start Time	Species Code	Common Name	Scientific Name	#	Distance (m)	Bearing	Behaviour	Pass Height (m)	Pass Direction	Comments
Chris Pepper	21-May-23	evw 125	7:22 AM	TRES	Tree Swallow	<i>Tachycineta bicolor</i>	1	50		X			
Chris Pepper	21-May-23	evw 130	7:52 AM	BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1	100		S			
Chris Pepper	21-May-23	evw 130	7:52 AM	NOWA	Northern Waterthrush	<i>Parkesia noveboracensis</i>	1	0		S			
Chris Pepper	21-May-23	evw 130	7:52 AM	PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1	50		S			
Chris Pepper	21-May-23	evw 130	7:52 AM	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	1	50		S			
Chris Pepper	21-May-23	evw 130	7:52 AM	AMRE	American Redstart	<i>Setophaga ruticilla</i>	3	0		S			
Chris Pepper	21-May-23	evw 130	7:52 AM	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	0		S			
Chris Pepper	21-May-23	evw 130	7:52 AM	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	2	0		S			
Chris Pepper	21-May-23	evw 130	7:52 AM	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1	50		S			
Chris Pepper	21-May-23	evw 130	7:52 AM	CAWA	Canada Warbler	<i>Cardellina canadensis</i>	1	100		S			
Chris Pepper	21-May-23	evw 130	7:52 AM	NOFL	Northern Flicker	<i>Colaptes auratus</i>	1	100		H			
Chris Pepper	21-May-23	evw 130	7:52 AM	LEFL	Least Flycatcher	<i>Empidonax minimus</i>	1	50	S	S			
Chris Pepper	21-May-23	evw 130	7:52 AM	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	2	50		S			
Chris Pepper	21-May-23	evw 130	7:52 AM	WIWR	Winter Wren	<i>Troglodytes hiemalis</i>	1	100		S			
Chris Pepper	21-May-23	evw 130	7:52 AM	NAWA	Nashville Warbler	<i>Leiothlypis ruficapilla</i>	1	100		S			
Chris Pepper	21-May-23	evw 130	7:52 AM	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1	50		H			
Chris Pepper	21-May-23	evw 130	7:52 AM	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1	100		S			
Chris Pepper	21-May-23	evw 132	8:07 AM	RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1	50	SW	S			
Chris Pepper	21-May-23	evw 132	8:07 AM	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	2	50		S			
Chris Pepper	21-May-23	evw 132	8:07 AM	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	2	0		S			
Chris Pepper	21-May-23	evw 132	8:07 AM	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	1	0		S			
Chris Pepper	21-May-23	evw 132	8:07 AM	NOWA	Northern Waterthrush	<i>Parkesia noveboracensis</i>	1	100		S			
Chris Pepper	21-May-23	evw 132	8:07 AM	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1	0		S			
Chris Pepper	21-May-23	evw 132	8:07 AM	PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1	50		S			
Chris Pepper	21-May-23	evw 132	8:07 AM	AMRE	American Redstart	<i>Setophaga ruticilla</i>	2	0		S			
Chris Pepper	21-May-23	evw 132	8:07 AM	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1	50		S			
Chris Pepper	21-May-23	evw 132	8:07 AM	OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	1	100		S			
Chris Pepper	21-May-23	evw 132	8:07 AM	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1	0		S			
Chris Pepper	21-May-23	evw 132	8:07 AM	BCCH	Black-capped Chickadee	<i>Poecile atricapillus</i>	1	0		H			
Chris Pepper	21-May-23	evw 132	8:07 AM	HETH	Hermit Thrush	<i>Catharus guttatus</i>	1	50		H			
Chris Pepper	24-May-23	evw187	9:36 AM	LEFL	Least Flycatcher	<i>Empidonax minimus</i>	3	0		S			
Chris Pepper	24-May-23	evw187	9:36 AM	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	2	0		S			
Chris Pepper	24-May-23	evw187	9:36 AM	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	3	0		S			
Chris Pepper	24-May-23	evw187	9:36 AM	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1	0		S			
Chris Pepper	24-May-23	evw187	9:36 AM	BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1	0		S			
Chris Pepper	24-May-23	evw187	9:36 AM	PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1	50		S			
Chris Pepper	24-May-23	evw187	9:36 AM	RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1	50	E	S			
Chris Pepper	24-May-23	evw187	9:36 AM	PUFI	Purple Finch	<i>Haemorhous purpureus</i>	1	50		S			
Chris Pepper	24-May-23	evw187	9:36 AM	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1	50		S			
Chris Pepper	24-May-23	evw187	9:36 AM	SWSP	Swamp Sparrow	<i>Melospiza georgiana</i>	1	50		S			
Chris Pepper	24-May-23	evw187	9:36 AM	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1	0		S			
Chris Pepper	24-May-23	evw187	9:36 AM	AMRE	American Redstart	<i>Setophaga ruticilla</i>	2	0		S			
Chris Pepper	24-May-23	evw187	9:36 AM	NOPA	Northern Parula	<i>Setophaga americana</i>	1	50		S			
Chris Pepper	24-May-23	evw187	9:36 AM	OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	1	100		S			
Chris Pepper	24-May-23	evw187	9:36 AM	YBSA	Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>	1	100		H			
Chris Pepper	24-May-23	evw187	9:36 AM	AMRO	American Robin	<i>Turdus migratorius</i>	2	100		H			
Chris Pepper	24-May-23	evw187	9:36 AM	WIWR	Winter Wren	<i>Troglodytes hiemalis</i>							
Chris Pepper	26-May-23	evw 163	6:06 AM	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	3	50		S			
Chris Pepper	26-May-23	evw 163	6:06 AM	YBSA	Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>	1	100		H			
Chris Pepper	26-May-23	evw 163	6:06 AM	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	2	100		S			
Chris Pepper	26-May-23	evw 163	6:06 AM	AMRE	American Redstart	<i>Setophaga ruticilla</i>	2	50		S			
Chris Pepper	26-May-23	evw 163	6:06 AM	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	2	100		S			
Chris Pepper	26-May-23	evw 163	6:06 AM	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1	0		H			
Chris Pepper	26-May-23	evw 163	6:06 AM	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1	0		S			

Table 4: 2023 Spring Migration Point Count Survey Results - Harbour Hills Wind Project

Project # 25-11682

Observer	Date	Survey Location	Survey Start Time	Species Code	Common Name	Scientific Name	#	Distance (m)	Bearing	Behaviour	Pass Height (m)	Pass Direction	Comments
Chris Pepper	26-May-23	evw 163	6:06 AM	RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1	100	E	S			
Chris Pepper	26-May-23	evw 163	6:06 AM	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1	0		S			
Chris Pepper	26-May-23	evw 163	6:06 AM	RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1	50	SW	S			
Chris Pepper	26-May-23	evw 163	6:06 AM	NOFL	Northern Flicker	<i>Colaptes auratus</i>	1	250		H			
Chris Pepper	26-May-23	evw 163	6:06 AM	RUGR	Ruffed Grouse	<i>Bonasa umbellus</i>	1	0		D			
Chris Pepper	26-May-23	evw 163	6:06 AM	PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1	50		S			
Chris Pepper	26-May-23	evw 162	6:23 AM	RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1	100	N	S			
Chris Pepper	26-May-23	evw 162	6:23 AM	PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1	50		S			
Chris Pepper	26-May-23	evw 162	6:23 AM	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	2	0		S			
Chris Pepper	26-May-23	evw 162	6:23 AM	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	3	50		S			
Chris Pepper	26-May-23	evw 162	6:23 AM	NOFL	Northern Flicker	<i>Colaptes auratus</i>	1	250		S			
Chris Pepper	26-May-23	evw 162	6:23 AM	SWSP	Swamp Sparrow	<i>Melospiza georgiana</i>	1	50		H			
Chris Pepper	26-May-23	evw 162	6:23 AM	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1	100		S			
Chris Pepper	26-May-23	evw 162	6:23 AM	HETH	Hermit Thrush	<i>Catharus guttatus</i>	1	0		S			
Chris Pepper	26-May-23	evw 162	6:23 AM	AMRE	American Redstart	<i>Setophaga ruticilla</i>	1	50		S			
Chris Pepper	26-May-23	evw 162	6:23 AM	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	2	100		S			
Chris Pepper	26-May-23	evw 162	6:23 AM	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1	50		S			
Chris Pepper	26-May-23	evw 162	6:23 AM	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1	0		H			
Chris Pepper	26-May-23	evw 162	6:23 AM	NAWA	Nashville Warbler	<i>Leiothlypis ruficapilla</i>	2	0		S			
Chris Pepper	26-May-23	evw 162	6:23 AM	AMGO	American Goldfinch	<i>Spinus tristis</i>	1	50		H			
Chris Pepper	26-May-23	evw 163	6:41 AM	NAWA	Nashville Warbler	<i>Leiothlypis ruficapilla</i>	1	0		S			
Chris Pepper	26-May-23	evw 163	6:41 AM	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	3	0		S			
Chris Pepper	26-May-23	evw 163	6:41 AM	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1	0		S			
Chris Pepper	26-May-23	evw 163	6:41 AM	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	3	0		S			
Chris Pepper	26-May-23	evw 163	6:41 AM	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	3	50		S			
Chris Pepper	26-May-23	evw 163	6:41 AM	BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1	0		S			
Chris Pepper	26-May-23	evw 163	6:41 AM	RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1	100		S			
Chris Pepper	26-May-23	evw 163	6:41 AM	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	2	50		S			
Chris Pepper	26-May-23	evw 163	6:41 AM	PUFI	Purple Finch	<i>Haemorrhous purpureus</i>	1	50		S			
Chris Pepper	26-May-23	evw 163	6:41 AM	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1	50		S			
Chris Pepper	26-May-23	evw 163	6:41 AM	AMRE	American Redstart	<i>Setophaga ruticilla</i>	1	50		S			
Chris Pepper	26-May-23	evw 163	6:41 AM	PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1	0		S			
Chris Pepper	26-May-23	evw 163	6:41 AM	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1	0		S			
Chris Pepper	26-May-23	evw 163	6:41 AM	BOCH	Boreal Chickadee	<i>Poecile hudsonicus</i>	2	50	NE	H			
Chris Pepper	26-May-23	evw 160	7:01 AM	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	2	0		S			
Chris Pepper	26-May-23	evw 160	7:01 AM	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1	100		S			
Chris Pepper	26-May-23	evw 160	7:01 AM	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	2	0		S			
Chris Pepper	26-May-23	evw 160	7:01 AM	NAWA	Nashville Warbler	<i>Leiothlypis ruficapilla</i>	1	0		S			
Chris Pepper	26-May-23	evw 160	7:01 AM	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	2	0		S			
Chris Pepper	26-May-23	evw 160	7:01 AM	RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1	50	N	S			
Chris Pepper	26-May-23	evw 160	7:01 AM	PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1	50		S			
Chris Pepper	26-May-23	evw 160	7:01 AM	DOWO	Downy Woodpecker	<i>Dryobates pubescens</i>	1	0		H			
Chris Pepper	26-May-23	evw 160	7:01 AM	HAWO	Hairy Woodpecker	<i>Dryobates villosus</i>	1	50		H			
Chris Pepper	26-May-23	evw 160	7:01 AM	OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	1	0		H			
Chris Pepper	26-May-23	evw 160	7:01 AM	COLO	Common Loon	<i>Gavia immer</i>	1	1000		X			
Chris Pepper	26-May-23	evw 160	7:01 AM	N/A	Woodpecker Sp.	N/A	1	500		H			
Chris Pepper	26-May-23	evw 160	7:01 AM	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1	0		H			
Chris Pepper	26-May-23	evw 160	7:01 AM	AMGO	American Goldfinch	<i>Spinus tristis</i>	1	0		H			
Chris Pepper	26-May-23	evw 160	7:01 AM	PUFI	Purple Finch	<i>Haemorrhous purpureus</i>	1	50		S			
Chris Pepper	26-May-23	evw 159	7:18 AM	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1	100		S			
Chris Pepper	26-May-23	evw 159	7:18 AM	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1	50		S			
Chris Pepper	26-May-23	evw 159	7:18 AM	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	2	0		S			
Chris Pepper	26-May-23	evw 159	7:18 AM	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	2	50		S			
Chris Pepper	26-May-23	evw 159	7:18 AM	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1	0		S			

Table 4: 2023 Spring Migration Point Count Survey Results - Harbour Hills Wind Project

Observer	Date	Survey Location	Survey Start Time	Species Code	Common Name	Scientific Name	#	Distance (m)	Bearing	Behaviour	Pass Height (m)	Pass Direction	Comments
Chris Pepper	26-May-23	evw 159	7:18 AM	AMRE	American Redstart	<i>Setophaga ruticilla</i>	1	0		S			
Chris Pepper	26-May-23	evw 159	7:18 AM	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	2	0		S			
Chris Pepper	26-May-23	evw 159	7:18 AM	RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1	100		S			
Chris Pepper	26-May-23	evw 159	7:18 AM	PAWA	Palm Warbler	<i>Setophaga palmarum</i>	2	50		S			
Chris Pepper	26-May-23	evw 159	7:18 AM	HETH	Hermit Thrush	<i>Catharus guttatus</i>	1	50		H			
Chris Pepper	26-May-23	evw 158	7:35 AM	BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1	50		S			
Chris Pepper	26-May-23	evw 158	7:35 AM	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1	0		S			
Chris Pepper	26-May-23	evw 158	7:35 AM	HETH	Hermit Thrush	<i>Catharus guttatus</i>	1	100		S			
Chris Pepper	26-May-23	evw 158	7:35 AM	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	3	50		S			
Chris Pepper	26-May-23	evw 158	7:35 AM	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	0		H			
Chris Pepper	26-May-23	evw 158	7:35 AM	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1	0		S			
Chris Pepper	26-May-23	evw 158	7:35 AM	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	2	0		S			
Chris Pepper	26-May-23	evw 158	7:35 AM	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1	0		S			
Chris Pepper	26-May-23	evw 158	7:35 AM	BCCH	Black-capped Chickadee	<i>Poecile atricapillus</i>	2	0		S			
Chris Pepper	26-May-23	evw 158	7:35 AM	BLBW	Blackburnian Warbler	<i>Setophaga fusca</i>	1	0		S			
Chris Pepper	26-May-23	evw 158	7:35 AM	OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	1	50		S			
Chris Pepper	26-May-23	evw 158	7:35 AM	NOPA	Northern Parula	<i>Setophaga americana</i>	1	0		H			
Chris Pepper	26-May-23	evw 158	7:35 AM	SWTH	Swainson's Thrush	<i>Catharus ustulatus</i>	1	0		H			
Chris Pepper	26-May-23	evw 158	7:35 AM	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	2	0		Pair			Pair
Chris Pepper	26-May-23	evw 158	7:35 AM	AMRO	American Robin	<i>Turdus migratorius</i>	1	0		H			
Chris Pepper	26-May-23	evw 154	8:00 AM	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	2	0		S			
Chris Pepper	26-May-23	evw 154	8:00 AM	NOPA	Northern Parula	<i>Setophaga americana</i>	1	0		S			
Chris Pepper	26-May-23	evw 154	8:00 AM	NAWA	Nashville Warbler	<i>Leiothlypis ruficapilla</i>	1	0		S			
Chris Pepper	26-May-23	evw 154	8:00 AM	BCCH	Black-capped Chickadee	<i>Poecile atricapillus</i>	1	0		H			
Chris Pepper	26-May-23	evw 154	8:00 AM	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	0		H			
Chris Pepper	26-May-23	evw 154	8:00 AM	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1	0		S			
Chris Pepper	26-May-23	evw 154	8:00 AM	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	2	0		S			
Chris Pepper	26-May-23	evw 154	8:00 AM	BTBW	Black-throated Blue Warbler	<i>Setophaga caerulescens</i>	1	50		S			
Chris Pepper	26-May-23	evw 154	8:00 AM	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1	0		S			
Chris Pepper	26-May-23	evw 154	8:00 AM	NOPA	Northern Parula	<i>Setophaga americana</i>	1	0		S			
Chris Pepper	26-May-23	evw 154	8:00 AM	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1	0		S			
Chris Pepper	26-May-23	evw 154	8:00 AM	CORA	Common Raven	<i>Corvus corax</i>	1	1000		X			
Chris Pepper	26-May-23	evw 154	8:00 AM	WIWR	Winter Wren	<i>Troglodytes hiemalis</i>	1	100		S			
Chris Pepper	26-May-23	evw 154	8:00 AM	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	2	0		A			
Chris Pepper	26-May-23	evw 154	8:00 AM	BLPW	Blackpoll Warbler	<i>Setophaga striata</i>	1	0		X			
Chris Pepper	26-May-23	evw 154	8:00 AM	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	1	100		H			
Chris Pepper	26-May-23	evw 153	8:21 AM	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	4	100		S			
Chris Pepper	26-May-23	evw 153	8:21 AM	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1	100		S			
Chris Pepper	26-May-23	evw 153	8:21 AM	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	2	50		S			
Chris Pepper	26-May-23	evw 153	8:21 AM	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1	50		S			
Chris Pepper	26-May-23	evw 153	8:21 AM	YBSA	Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>	1	50		H			
Chris Pepper	26-May-23	evw 153	8:21 AM	WIWR	Winter Wren	<i>Troglodytes hiemalis</i>	1	100		S			
Chris Pepper	26-May-23	evw 153	8:21 AM	RUGR	Ruffed Grouse	<i>Bonasa umbellus</i>	1	50		D			
Chris Pepper	26-May-23	evw 153	8:21 AM	MODO	Mourning Dove	<i>Zenaida macroura</i>	1	100		S			
Chris Pepper	26-May-23	evw 153	8:21 AM	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1	0		S			
Chris Pepper	26-May-23	evw 153	8:21 AM	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	50		S			
Chris Pepper	26-May-23	evw 153	8:21 AM	AMGO	American Goldfinch	<i>Spinus tristis</i>	1	0		H			
Chris Pepper	26-May-23	evw 156	8:38 AM	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	2	0		S			
Chris Pepper	26-May-23	evw 156	8:38 AM	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	3	100		S			
Chris Pepper	26-May-23	evw 156	8:38 AM	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	3	100		S			
Chris Pepper	26-May-23	evw 156	8:38 AM	OSPR	Osprey	<i>Pandion haliaetus</i>	1	250		H			Carrying fish
Chris Pepper	26-May-23	evw 156	8:38 AM	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1	50		S			
Chris Pepper	26-May-23	evw 156	8:38 AM	PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1	50		H			
Chris Pepper	26-May-23	evw 156	8:38 AM	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	1	50		S			

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Project # 25-11682

Observer	Date	Survey Location	Survey Start Time	Species Code	Common Name	Scientific Name	#	Distance (m)	Bearing	Behaviour	Pass Height (m)	Pass Direction	Comments
Chris Pepper	26-May-23	evw 156	8:38 AM	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	3	0		H			
Chris Pepper	26-May-23	evw 156	8:38 AM	HETH	Hermit Thrush	<i>Catharus guttatus</i>	1	0		H			
Chris Pepper	26-May-23	evw 156	8:38 AM	LISP	Lincoln's Sparrow	<i>Melospiza lincolnii</i>	1	0		S			
Chris Pepper	26-May-23	evw 189	8:52 AM	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1	0		S			
Chris Pepper	26-May-23	evw 189	8:52 AM	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1	0		S			
Chris Pepper	26-May-23	evw 189	8:52 AM	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	2	50		S			
Chris Pepper	26-May-23	evw 189	8:52 AM	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	2	50		S			
Chris Pepper	26-May-23	evw 189	8:52 AM	NOFL	Northern Flicker	<i>Colaptes auratus</i>	1	100		S			
Chris Pepper	26-May-23	evw 189	8:52 AM	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1	50		S			
Chris Pepper	26-May-23	evw 189	8:52 AM	RUGR	Ruffed Grouse	<i>Bonasa umbellus</i>	1	0		D			
Chris Pepper	26-May-23	evw 189	8:52 AM	PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1	50		S			
Chris Pepper	26-May-23	evw 189	8:52 AM	BCCH	Black-capped Chickadee	<i>Poecile atricapillus</i>	1	100		H			
Chris Pepper	26-May-23	evw 189	8:52 AM	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1	50		S			
Chris Pepper	26-May-23	evw 153	9:06 AM	NOFL	Northern Flicker	<i>Colaptes auratus</i>	1	100		H			
Chris Pepper	26-May-23	evw 153	9:06 AM	PAWA	Palm Warbler	<i>Setophaga palmarum</i>	2	50		S			
Chris Pepper	26-May-23	evw 153	9:06 AM	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	2	50		S			
Chris Pepper	26-May-23	evw 153	9:06 AM	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	2	0		S			
Chris Pepper	26-May-23	evw 153	9:06 AM	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1	50		S			
Chris Pepper	26-May-23	evw 153	9:06 AM	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	2	0		S			
Chris Pepper	26-May-23	evw 153	9:06 AM	RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1	100	E	S			
Chris Pepper	26-May-23	evw 153	9:06 AM	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1	50		S			
Chris Pepper	26-May-23	evw 153	9:06 AM	BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1	0		S			
Chris Pepper	26-May-23	evw 196	9:21 AM	NOWA	Northern Waterthrush	<i>Parkesia noveboracensis</i>	1	0		S			
Chris Pepper	26-May-23	evw 196	9:21 AM	RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1	0	S	S			
Chris Pepper	26-May-23	evw 196	9:21 AM	PAWA	Palm Warbler	<i>Setophaga palmarum</i>	2	0		S			
Chris Pepper	26-May-23	evw 196	9:21 AM	BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1	0		S			
Chris Pepper	26-May-23	evw 196	9:21 AM	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1	50		S			
Chris Pepper	26-May-23	evw 196	9:21 AM	YBFL	Yellow-bellied Flycatcher	<i>Empidonax flaviventris</i>	1	50		S			
Chris Pepper	26-May-23	evw 196	9:21 AM	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	2	0		S			
Chris Pepper	26-May-23	evw 196	9:21 AM	AMGO	American Goldfinch	<i>Spinus tristis</i>	1	0		H			
Chris Pepper	26-May-23	evw 196	9:21 AM	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	0		H			
Chris Pepper	26-May-23	evw 196	9:21 AM	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1	0		S			
Chris Pepper	26-May-23	evw 196	9:21 AM	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1	0		S			
Chris Pepper	26-May-23	evw 196	9:21 AM	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1	100		S			
Chris Pepper	26-May-23	evw 157	9:34 AM	RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1	100	N	S			
Chris Pepper	26-May-23	evw 157	9:34 AM	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	3	100		S			
Chris Pepper	26-May-23	evw 157	9:34 AM	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	2	50		S			
Chris Pepper	26-May-23	evw 157	9:34 AM	PAWA	Palm Warbler	<i>Setophaga palmarum</i>	2	50		S			
Chris Pepper	26-May-23	evw 157	9:34 AM	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	2	0		S			
Chris Pepper	29-May-23	evw 110	5:41 AM	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	1	0		S			
Chris Pepper	29-May-23	evw 110	5:41 AM	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	2	0		S			
Chris Pepper	29-May-23	evw 110	5:41 AM	RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1	50	NW	S			
Chris Pepper	29-May-23	evw 110	5:41 AM	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	2	50		S			
Chris Pepper	29-May-23	evw 110	5:41 AM	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1	100		S			
Chris Pepper	29-May-23	evw 110	5:41 AM	BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1	50		S			
Chris Pepper	29-May-23	evw 110	5:41 AM	PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1	0		S			
Chris Pepper	29-May-23	evw 110	5:41 AM	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1	0		S			
Chris Pepper	29-May-23	evw 110	5:41 AM	SWTH	Swainson's Thrush	<i>Catharus ustulatus</i>	1	0		H			
Chris Pepper	29-May-23	evw 110	5:41 AM	OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	2	0		S			
Chris Pepper	29-May-23	evw 110	5:41 AM	YBFL	Yellow-bellied Flycatcher	<i>Empidonax flaviventris</i>	1	50		S			
Chris Pepper	29-May-23	evw 110	5:41 AM	YBSA	Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>	1	100		H			
Chris Pepper	29-May-23	evw 110	5:41 AM	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	2	0		S			
Chris Pepper	29-May-23	evw 110	5:41 AM	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	2	0		S			
Chris Pepper	29-May-23	evw 110	5:41 AM	PIWO	Pileated Woodpecker	<i>Dryocopus pileatus</i>	1	250		H			

Table 4: 2023 Spring Migration Point Count Survey Results - Harbour Hills Wind Project

Project # 25-11682

Observer	Date	Survey Location	Survey Start Time	Species Code	Common Name	Scientific Name	#	Distance (m)	Bearing	Behaviour	Pass Height (m)	Pass Direction	Comments
Chris Pepper	29-May-23	evw 110	5:41 AM	BOCH	Boreal Chickadee	<i>Poecile hudsonicus</i>	1	0	N	H			
Chris Pepper	29-May-23	evw 110	5:41 AM	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	0		S			
Chris Pepper	29-May-23	evw 110	5:41 AM	HETH	Hermit Thrush	<i>Catharus guttatus</i>	1	1		H			
Chris Pepper	29-May-23	evw 112	6:01 AM	NAWA	Nashville Warbler	<i>Leiothlypis ruficapilla</i>	1	50		S			
Chris Pepper	29-May-23	evw 112	6:01 AM	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	2	50		S			
Chris Pepper	29-May-23	evw 112	6:01 AM	PUFI	Purple Finch	<i>Haemorhous purpureus</i>	1	50		S			
Chris Pepper	29-May-23	evw 112	6:01 AM	RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1	100		S			
Chris Pepper	29-May-23	evw 112	6:01 AM	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	2	2		S			
Chris Pepper	29-May-23	evw 112	6:01 AM	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	2	2		S			
Chris Pepper	29-May-23	evw 112	6:01 AM	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	3	0		S			
Chris Pepper	29-May-23	evw 112	6:01 AM	PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1	0		S			
Chris Pepper	29-May-23	evw 112	6:01 AM	YBFL	Yellow-bellied Flycatcher	<i>Empidonax flaviventris</i>	2	50		S			
Chris Pepper	29-May-23	evw 112	6:01 AM	HETH	Hermit Thrush	<i>Catharus guttatus</i>	1	50		S			
Chris Pepper	29-May-23	evw 112	6:01 AM	OSFL	Olive-sided Flycatcher	<i>Contopus cooperi</i>	1	100	NW	H			
Chris Pepper	29-May-23	evw 112	6:01 AM	SWTH	Swainson's Thrush	<i>Catharus ustulatus</i>	1	0		S			
Chris Pepper	29-May-23	evw 112	6:01 AM	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1	50		S			
Chris Pepper	29-May-23	evw 112	6:01 AM	CAWA	Canada Warbler	<i>Cardellina canadensis</i>	1	100	SE	S			
Chris Pepper	29-May-23	evw 112	6:01 AM	AMRE	American Redstart	<i>Setophaga ruticilla</i>	1	100		S			
Chris Pepper	29-May-23	evw 112	6:01 AM	CAWA	Canada Warbler	<i>Cardellina canadensis</i>	1	100	SW	S			
Chris Pepper	29-May-23	evw 112	6:01 AM	AMRO	American Robin	<i>Turdus migratorius</i>	1	50		H			
Chris Pepper	29-May-23	evw 112	6:01 AM	LISP	Lincoln's Sparrow	<i>Melospiza lincolni</i>	1	50		S			
Chris Pepper	29-May-23	evw 112	6:01 AM	NOFL	Northern Flicker	<i>Colaptes auratus</i>	1	100		H			
Chris Pepper	29-May-23	evw 116	6:32 AM	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	3	50		S			
Chris Pepper	29-May-23	evw 116	6:32 AM	NAWA	Nashville Warbler	<i>Leiothlypis ruficapilla</i>	1	0		H			
Chris Pepper	29-May-23	evw 116	6:32 AM	BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1	100		S			
Chris Pepper	29-May-23	evw 116	6:32 AM	AMRE	American Redstart	<i>Setophaga ruticilla</i>	2	50		S			
Chris Pepper	29-May-23	evw 116	6:32 AM	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1	100		S			
Chris Pepper	29-May-23	evw 116	6:32 AM	FOSP	Fox Sparrow	<i>Passerella iliaca</i>	1	50	NE	S			
Chris Pepper	29-May-23	evw 116	6:32 AM	OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	2	100		S			
Chris Pepper	29-May-23	evw 116	6:32 AM	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1	100		S			
Chris Pepper	29-May-23	evw 116	6:32 AM	NOPA	Northern Parula	<i>Setophaga americana</i>	1	100		S			
Chris Pepper	29-May-23	evw 190	6:49 AM	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	2	0		S			
Chris Pepper	29-May-23	evw 190	6:49 AM	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	2	0		S			
Chris Pepper	29-May-23	evw 190	6:49 AM	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	2	50		S			
Chris Pepper	29-May-23	evw 190	6:49 AM	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1	0		S			
Chris Pepper	29-May-23	evw 190	6:49 AM	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1	0		S			
Chris Pepper	29-May-23	evw 190	6:49 AM	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	2	0		S			
Chris Pepper	29-May-23	evw 190	6:49 AM	PAWA	Palm Warbler	<i>Setophaga palmarum</i>	2	50		S			
Chris Pepper	29-May-23	evw 190	6:49 AM	OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	2	100		S			
Chris Pepper	29-May-23	evw 190	6:49 AM	BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1	100		S			
Chris Pepper	29-May-23	evw 190	6:49 AM	EVGR	Evening Grosbeak	<i>Coccothraustes vespertinus</i>	1	0	N	Flying	50	S	
Chris Pepper	29-May-23	evw 190	6:49 AM	BTBW	Black-throated Blue Warbler	<i>Setophaga caerulescens</i>	1	100		S			
Chris Pepper	29-May-23	evw 190	6:49 AM	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1	50		S			
Chris Pepper	29-May-23	evw 115	7:06 AM	RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1	50	W	S			
Chris Pepper	29-May-23	evw 115	7:06 AM	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	2	0		S			
Chris Pepper	29-May-23	evw 115	7:06 AM	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1	0		S			
Chris Pepper	29-May-23	evw 115	7:06 AM	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	2	50		S			
Chris Pepper	29-May-23	evw 115	7:06 AM	PAWA	Palm Warbler	<i>Setophaga palmarum</i>	2	50		S			
Chris Pepper	29-May-23	evw 115	7:06 AM	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	2	0		S			
Chris Pepper	29-May-23	evw 115	7:06 AM	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1	0		S			
Chris Pepper	29-May-23	evw 115	7:06 AM	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	0		S			
Chris Pepper	29-May-23	evw 115	7:06 AM	RBNU	Red-breasted Nuthatch	<i>Sitta canadensis</i>	1	0		H			
Chris Pepper	29-May-23	evw 115	7:06 AM	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1	50		S			
Chris Pepper	29-May-23	evw 115	7:06 AM	PIWO	Pileated Woodpecker	<i>Dryocopus pileatus</i>	1	100		H			

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Project # 25-11682

Observer	Date	Survey Location	Survey Start Time	Species Code	Common Name	Scientific Name	#	Distance (m)	Bearing	Behaviour	Pass Height (m)	Pass Direction	Comments
Chris Pepper	29-May-23	evw 115	7:06 AM	CAJA	Canada Jay	<i>Perisoreus canadensis</i>	2	0	E	H			
Chris Pepper	29-May-23	evw 115	7:06 AM	BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1	100		S			
Chris Pepper	29-May-23	evw 113	7:23 AM	NAWA	Nashville Warbler	<i>Leiothlypis ruficapilla</i>	1	0		A			
Chris Pepper	29-May-23	evw 113	7:23 AM	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1	0		S			
Chris Pepper	29-May-23	evw 113	7:23 AM	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	2	50		S			
Chris Pepper	29-May-23	evw 113	7:23 AM	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	2	0		S			
Chris Pepper	29-May-23	evw 113	7:23 AM	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	3	50		S			
Chris Pepper	29-May-23	evw 113	7:23 AM	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1	100		S			
Chris Pepper	29-May-23	evw 113	7:23 AM	YBFL	Yellow-bellied Flycatcher	<i>Empidonax flaviventris</i>	1	50		S			
Chris Pepper	29-May-23	evw 113	7:23 AM	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1	50		S			
Chris Pepper	29-May-23	evw 113	7:23 AM	SWTH	Swainson's Thrush	<i>Catharus ustulatus</i>	1	50		S			
Chris Pepper	29-May-23	evw 121	7:56 AM	OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	2	0		S			
Chris Pepper	29-May-23	evw 121	7:56 AM	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	2	50		S			
Chris Pepper	29-May-23	evw 121	7:56 AM	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1	50		S			
Chris Pepper	29-May-23	evw 121	7:56 AM	LEFL	Least Flycatcher	<i>Empidonax minimus</i>	2	0		S			
Chris Pepper	29-May-23	evw 121	7:56 AM	AMRE	American Redstart	<i>Setophaga ruticilla</i>	2	0		S			
Chris Pepper	29-May-23	evw 121	7:56 AM	BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1	100		S			
Chris Pepper	29-May-23	evw 121	7:56 AM	WIWR	Winter Wren	<i>Troglodytes hiemalis</i>	1	100		S			
Chris Pepper	29-May-23	evw 121	7:56 AM	NOPA	Northern Parula	<i>Setophaga americana</i>	2	0		P			
Chris Pepper	29-May-23	evw 121	7:56 AM	BTBW	Black-throated Blue Warbler	<i>Setophaga caerulescens</i>	1	0		H			
Chris Pepper	29-May-23	evw 122	8:14 AM	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	1	50		S			
Chris Pepper	29-May-23	evw 122	8:14 AM	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	2	0		S			
Chris Pepper	29-May-23	evw 122	8:14 AM	OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	2	50		S			
Chris Pepper	29-May-23	evw 122	8:14 AM	LEFL	Least Flycatcher	<i>Empidonax minimus</i>	1	0		S			
Chris Pepper	29-May-23	evw 122	8:14 AM	YBFL	Yellow-bellied Flycatcher	<i>Empidonax flaviventris</i>	1	100		S			
Chris Pepper	29-May-23	evw 122	8:14 AM	AMRE	American Redstart	<i>Setophaga ruticilla</i>	1	50		S			
Chris Pepper	29-May-23	evw 120	8:31 AM	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	2	0		S			
Chris Pepper	29-May-23	evw 120	8:31 AM	NOWA	Northern Waterthrush	<i>Parkesia noveboracensis</i>	1	250		S			
Chris Pepper	29-May-23	evw 120	8:31 AM	OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	2	0		S			
Chris Pepper	29-May-23	evw 120	8:31 AM	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	2	0		S			
Chris Pepper	29-May-23	evw 120	8:31 AM	RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1	0	N	S			
Chris Pepper	29-May-23	evw 120	8:31 AM	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1	0		S			
Chris Pepper	29-May-23	evw 120	8:31 AM	HETH	Hermit Thrush	<i>Catharus guttatus</i>	1	100		S			
Chris Pepper	29-May-23	evw 120	8:31 AM	PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1	0		S			
Chris Pepper	29-May-23	evw 120	8:31 AM	YBFL	Yellow-bellied Flycatcher	<i>Empidonax flaviventris</i>	1	50		S			
Chris Pepper	29-May-23	evw 120	8:31 AM	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	0		S			
Chris Pepper	29-May-23	evw 120	8:31 AM	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1	50		S			
Chris Pepper	29-May-23	evw 120	8:31 AM	WIWR	Winter Wren	<i>Troglodytes hiemalis</i>	1	100		S			
Chris Pepper	29-May-23	evw 119	8:46 AM	NAWA	Nashville Warbler	<i>Leiothlypis ruficapilla</i>	1	0		S			
Chris Pepper	29-May-23	evw 119	8:46 AM	BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1	0		S			
Chris Pepper	29-May-23	evw 119	8:46 AM	RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1	0	NE	S			
Chris Pepper	29-May-23	evw 119	8:46 AM	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	0		S			
Chris Pepper	29-May-23	evw 119	8:46 AM	CAWA	Canada Warbler	<i>Cardellina canadensis</i>	2	0	N	A			Agitated pair
Chris Pepper	29-May-23	evw 119	8:46 AM	BLPW	Blackpoll Warbler	<i>Setophaga striata</i>	1	0		X			
Chris Pepper	29-May-23	evw 119	8:46 AM	RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1	100	W	S			
Chris Pepper	29-May-23	evw 127	9:09 AM	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1	100		S			
Chris Pepper	29-May-23	evw 127	9:09 AM	OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	3	50		S			
Chris Pepper	29-May-23	evw 127	9:09 AM	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1	50		S			
Chris Pepper	29-May-23	evw 127	9:09 AM	HETH	Hermit Thrush	<i>Catharus guttatus</i>	1	50		H			
Chris Pepper	29-May-23	evw 127	9:09 AM	AMRO	American Robin	<i>Turdus migratorius</i>	1	0		H			
Chris Pepper	29-May-23	evw 128	9:22 AM	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1	0		S			
Chris Pepper	29-May-23	evw 128	9:22 AM	NAWA	Nashville Warbler	<i>Leiothlypis ruficapilla</i>	1	0		S			
Chris Pepper	29-May-23	evw 128	9:22 AM	HETH	Hermit Thrush	<i>Catharus guttatus</i>	1	50		S			
Chris Pepper	29-May-23	evw 128	9:22 AM	PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1	50		S			

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Project # 25-11682

Observer	Date	Survey Location	Survey Start Time	Species Code	Common Name	Scientific Name	#	Distance (m)	Bearing	Behaviour	Pass Height (m)	Pass Direction	Comments
Chris Pepper	29-May-23	evw 128	9:22 AM	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	1	50		S			
Chris Pepper	29-May-23	evw 128	9:22 AM	BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1	50		S			
Chris Pepper	29-May-23	evw 128	9:22 AM	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1	50		S			
Chris Pepper	29-May-23	evw 128	9:22 AM	RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1	50	E	S			
Chris Pepper	29-May-23	evw 128	9:22 AM	BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1	50		S			
Chris Pepper	29-May-23	evw 128	9:22 AM	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1	50		S			
Chris Pepper	29-May-23	evw 126	9:39 AM	BOCH	Boreal Chickadee	<i>Poecile hudsonicus</i>	1	50	SW	H			
Chris Pepper	29-May-23	evw 126	9:39 AM	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	3	0		S			
Chris Pepper	29-May-23	evw 126	9:39 AM	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	2	100		S			
Chris Pepper	29-May-23	evw 126	9:39 AM	RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	2	0	W	P			Behaving like pair
Chris Pepper	29-May-23	evw 126	9:39 AM	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	3	0		S			
Chris Pepper	29-May-23	evw 126	9:39 AM	BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1	50		S			
Chris Pepper	29-May-23	evw 126	9:39 AM	PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1	0		S			
Chris Pepper	29-May-23	evw 135	10:06 AM	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1	100		S			
Chris Pepper	29-May-23	evw 135	10:06 AM	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1	50		S			
Chris Pepper	29-May-23	evw 135	10:06 AM	BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1	50		S			
Chris Pepper	29-May-23	evw 135	10:06 AM	PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1	0		S			
Chris Pepper	29-May-23	evw 135	10:06 AM	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1	0		H			
Chris Pepper	29-May-23	evw 135	10:06 AM	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1	100		S			
Chris Pepper	29-May-23	evw 152	10:31 AM	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	2	0		S			
Chris Pepper	29-May-23	evw 152	10:31 AM	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1	0		S			
Chris Pepper	29-May-23	evw 152	10:31 AM	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1	100		S			
Chris Pepper	29-May-23	evw 152	10:31 AM	PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1	50		S			
Chris Pepper	29-May-23	evw 142	10:45 AM	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	1	0		S			
Chris Pepper	29-May-23	evw 142	10:45 AM	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1	100		S			
Chris Pepper	29-May-23	evw 142	10:45 AM	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1	0		S			
Chris Pepper	29-May-23	evw 142	10:45 AM	PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1	0		S			
Chris Pepper	29-May-23	evw 141	10:58 AM	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	1	0		S			
Chris Pepper	29-May-23	evw 141	10:58 AM	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1	0		S			
Chris Pepper	29-May-23	evw 141	10:58 AM	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	2	0		S			
Chris Pepper	29-May-23	evw 140	11:11 AM	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	0		S			
Chris Pepper	29-May-23	evw 140	11:11 AM	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1	100		S			
Chris Pepper	29-May-23	evw 140	11:11 AM	BCCH	Black-capped Chickadee	<i>Poecile atricapillus</i>	2	0		H			
Chris Pepper	29-May-23	evw 140	11:11 AM	PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1	0		S			
Chris Pepper	29-May-23	evw 140	11:11 AM	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	1	0		S			
Chris Pepper	29-May-23	evw 139	11:24 AM	PAWA	Palm Warbler	<i>Setophaga palmarum</i>	2	0					
Chris Pepper	29-May-23	evw 139	11:24 AM	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1	0		S			
Chris Pepper	29-May-23	evw 139	11:24 AM	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1	100		S			
Chris Pepper	29-May-23	evw 139	11:24 AM	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	1	50		S			

Table 5: 2023 Spring Migration Point Count Survey Summary - Harbour Hills Wind Project

Project # 25-11682

Common Name	Scientific Name	SARA Status	COSEWIC Status	ESA Status	NS S-Rank	Number Observed
American Black Duck	<i>Anas rubripes</i>	-	-	-	S5B,S5N	2
American Crow	<i>Corvus brachyrhynchos</i>	-	-	-	S5	22
American Goldfinch	<i>Spinus tristis</i>	-	-	-	S5	17
American Kestrel	<i>Falco sparverius</i>	-	-	-	S3B,S4M	2
American Redstart	<i>Setophaga ruticilla</i>	-	-	-	S5B	23
American Robin	<i>Turdus migratorius</i>	-	-	-	S5B,S5N	57
Barred Owl	<i>Strix varia</i>	-	-	-	S4	2
Black-and-white Warbler	<i>Mniotilta varia</i>	-	-	-	S5B	96
Black-backed Woodpecker	<i>Picoides arcticus</i>	-	-	-	S3S4	1
Blackburnian Warbler	<i>Setophaga fusca</i>	-	-	-	S5B	3
Black-capped Chickadee	<i>Poecile atricapillus</i>	-	-	-	S5	47
Blackpoll Warbler	<i>Setophaga striata</i>	-	-	-	S3?B,S5M	4
Black-throated Blue Warbler	<i>Setophaga caerulescens</i>	-	-	-	S4B	4
Black-throated Green Warbler	<i>Setophaga virens</i>	-	-	-	S4B	98
Blue Jay	<i>Cyanocitta cristata</i>	-	-	-	S5	18
Blue-headed Vireo	<i>Vireo solitarius</i>	-	-	-	S5B	52
Boreal Chickadee	<i>Poecile hudsonicus</i>	-	-	-	S3	27
Broad-winged Hawk	<i>Buteo platypterus</i>	-	-	-	S5?B	1
Brown Creeper	<i>Certhia americana</i>	-	-	-	S5	9
Canada Goose	<i>Branta canadensis</i>	-	-	-	S5B,S5N	23
Canada Jay	<i>Perisoreus canadensis</i>	-	-	-	S3	9
Canada Warbler	<i>Cardellina canadensis</i>	Threatened	Special Concern	Endangered	S2S3B	5
Common Grackle	<i>Quiscalus quiscula</i>	-	-	-	S5B,SUN	13
Common Loon	<i>Gavia immer</i>	-	Not at Risk	-	S4B,S4N	5
Common Raven	<i>Corvus corax</i>	-	-	-	S4	38
Common Yellowthroat	<i>Geothlypis trichas</i>	-	-	-	S5B	74
Dark-eyed Junco	<i>Junco hyemalis</i>	-	-	-	S5	122
Double-crested Cormorant	<i>Nannopterum auritum</i>	-	Not at Risk	-	S5B	3
Downy Woodpecker	<i>Dryobates pubescens</i>	-	-	-	S5	7
Evening Grosbeak	<i>Coccothraustes vespertinus</i>	Special Concern	Special Concern	Vulnerable	S3B,S3N	3
Fox Sparrow	<i>Passerella iliaca</i>	-	-	-	S3B,S4M	7
Golden-crowned Kinglet	<i>Regulus satrapa</i>	-	-	-	S5	97
Great Horned Owl	<i>Bubo virginianus</i>	-	-	-	S4	2

Table 5: 2023 Spring Migration Point Count Survey Summary - Harbour Hills Wind Project

Project # 25-11682

Common Name	Scientific Name	SARA Status	COSEWIC Status	ESA Status	NS S-Rank	Number Observed
Greater Yellowlegs	<i>Tringa melanoleuca</i>	-	-	-	S3B,S4M	6
Grey Catbird	<i>Dumetella carolinensis</i>	-	-	-	S5B	1
Hairy Woodpecker	<i>Dryobates villosus</i>	-	-	-	S5	23
Hermit Thrush	<i>Catharus guttatus</i>	-	-	-	S5B	58
Herring Gull	<i>Larus argentatus</i>	-	-	-	S4	1
Least Flycatcher	<i>Empidonax minimus</i>	-	-	-	S5B	13
Lincoln's Sparrow	<i>Melospiza lincolni</i>	-	-	-	S4B	5
Magnolia Warbler	<i>Setophaga magnolia</i>	-	-	-	S4S5B	112
Merlin	<i>Falco columbarius</i>	-	Not at Risk	-	S4S5B	1
Mourning Dove	<i>Zenaida macroura</i>	-	-	-	S5	3
Nashville Warbler	<i>Leiothlypis ruficapilla</i>	-	-	-	S4B,S5M	25
Northern Flicker	<i>Colaptes auratus</i>	-	-	-	S5B	53
Northern Parula	<i>Setophaga americana</i>	-	-	-	S5B	15
Northern Waterthrush	<i>Parus noveboracensis</i>	-	-	-	S5B	59
Olive-sided Flycatcher	<i>Contopus cooperi</i>	Special Concern	Special Concern	Threatened	S3B	1
Osprey	<i>Pandion haliaetus</i>	-	-	-	S4B	1
Ovenbird	<i>Seiurus aurocapilla</i>	-	-	-	S5B	52
Palm Warbler	<i>Setophaga palmarum</i>	-	-	-	S5B	129
Pileated Woodpecker	<i>Dryocopus pileatus</i>	-	-	-	S5	23
Purple Finch	<i>Haemorhous purpureus</i>	-	-	-	S5B,S4N	43
Red-breasted Nuthatch	<i>Sitta canadensis</i>	-	-	-	S5	2
Red-tailed Hawk	<i>Buteo jamaicensis</i>	-	Not at Risk	-	S4	1
Red-winged Blackbird	<i>Agelaius phoeniceus</i>	-	-	-	S4S5B,SUN	1
Rock Pigeon	<i>Columba livia</i>	-	-	-	SNA	2
Ruby-crowned Kinglet	<i>Corthylio calendula</i>	-	-	-	S4B,S5M	84
Ruffed Grouse	<i>Bonasa umbellus</i>	-	-	-	S5	24
Savannah Sparrow	<i>Passerculus sandwichensis</i>	-	-	-	S4B,S5M	2
Song Sparrow	<i>Melospiza melodia</i>	-	-	-	S5B	5
Spruce Grouse	<i>Canachites canadensis</i>	-	-	-	S4	24
Swainson's Thrush	<i>Catharus ustulatus</i>	-	-	-	S4B,S5M	9
Swamp Sparrow	<i>Melospiza georgiana</i>	-	-	-	S5B	6
Tree Swallow	<i>Tachycineta bicolor</i>	-	-	-	S4S5B	10
White-breasted Nuthatch	<i>Sitta carolinensis</i>	-	-	-	S5?	2

Table 5: 2023 Spring Migration Point Count Survey Summary - Harbour Hills Wind Project

Project # 25-11682

Common Name	Scientific Name	SARA Status	COSEWIC Status	ESA Status	NS S-Rank	Number Observed
White-throated Sparrow	<i>Zonotrichia albicollis</i>	-	-	-	S4S5B,S5M	155
Wilson's Snipe	<i>Gallinago delicata</i>	-	-	-	S3B,S4M	2
Winter Wren	<i>Troglodytes hiemalis</i>	-	-	-	S5B	39
Yellow-bellied Flycatcher	<i>Empidonax flaviventris</i>	-	-	-	S4B,S5M	8
Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>	-	-	-	S5B	20
Yellow-rumped Warbler	<i>Setophaga coronata</i>	-	-	-	S5B	115
Blackbird Sp.	N/A	N/A	N/A	N/A	N/A	3
Thrush Sp.	N/A	N/A	N/A	N/A	N/A	1
Woodpecker Sp.	N/A	N/A	N/A	N/A	N/A	22

Table 6: 2023 Spring Migration Diurnal Watch Count Survey Results - Harbour Hills Wind Project

Observer	Date	Survey Location	Survey Start Time	Species Codes	Common Name	Scientific Name	#	Bearing	Distance (m)	Pass Height (m)	Pass Direction	Comments
Chris Pepper	9-Apr-23	evw hawk 1	11:32 AM	AMKE	American Kestrel	<i>Falco sparverius</i>	1	SW	500		W	Hunting
Chris Pepper	9-Apr-23	evw hawk 1		AMCR	American Crow	<i>Corvus brachyrhynchos</i>	1	SW	1000		NW	Passing
Chris Pepper	9-Apr-23	evw hawk 1	12:02 PM	N/A	N/A	N/A	0					No birds observed
Chris Pepper	9-Apr-23	evw hawk 1	12:32 PM	N/A	Common Raven	<i>Corvus corax</i>	1	NE	1000		NE	Passing
Chris Pepper	9-Apr-23	evw hawk 1		N/A	Red-tailed Hawk	<i>Buteo jamaicensis</i>	1	SW	500		E	Passing
Chris Pepper	9-Apr-23	evw hawk 1	1:02 AM	N/A	Bald Eagle	<i>Haliaeetus leucocephalus</i>	1	W	1000		N/A	Soaring
Chris Pepper	9-Apr-23	evw hawk 1	1:32 AM	N/A	N/A	N/A	0					No birds observed
Chris Pepper	9-Apr-23	evw hawk 1	2:02 AM	N/A	Red-tailed Hawk	<i>Buteo jamaicensis</i>	1	S	500		S	Passing
Chris Pepper	9-Apr-23	evw hawk 1		N/A	Red-tailed Hawk	<i>Buteo jamaicensis</i>	1	SW	250		NE	Passing
Chris Pepper	10-Apr-23	evw hawk 2	11:58 AM	PIWO	Pileated Woodpecker	<i>Dryocopus pileatus</i>	1					Calling
Chris Pepper	10-Apr-23	evw hawk 2	12:28 PM	N/A	N/A	N/A	0					No birds observed
Chris Pepper	10-Apr-23	evw hawk 2	12:58 PM	N/A	N/A	N/A	0					No birds observed
Chris Pepper	10-Apr-23	evw hawk 2	1:28 AM	N/A	N/A	N/A	0					No birds observed
Chris Pepper	11-Apr-23	evw hawk 3	11:14 AM	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	1	W	500	-50	S	Passing
Chris Pepper	11-Apr-23	evw hawk 3		BAEA	Bald Eagle	<i>Haliaeetus leucocephalus</i>	1	S	500	-50	W	Passing
Chris Pepper	11-Apr-23	evw hawk 3	11:44 AM	CAGO	Canada Goose	<i>Branta canadensis</i>	2	SW	250	-50	N	Passing
Chris Pepper	11-Apr-23	evw hawk 3		RTHA	Red-tailed Hawk	<i>Buteo jamaicensis</i>	1	S	500	-50	W	Passing
Chris Pepper	11-Apr-23	evw hawk 3		CORA	Common Raven	<i>Corvus corax</i>	1	SW	1000	-50	E	Passing
Chris Pepper	11-Apr-23	evw hawk 3	12:14 PM	N/A	N/A	N/A	0					No birds observed
Chris Pepper	11-Apr-23	evw hawk 3	12:44 PM	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	2	N	50	-50	S	Passing
Chris Pepper	11-Apr-23	evw hawk 3	1:14 AM	HERG	Herring Gull	<i>Larus argentatus</i>	1	SW	2000	50+	W	Passing
Chris Pepper	11-Apr-23	evw hawk 3		RLHA	Rough-legged Hawk	<i>Buteo lagopus</i>	1	SW	1000	100+	N	Soaring
Chris Pepper	11-Apr-23	evw hawk 3	1:44 AM	GBHE	Great Blue Heron	<i>Ardea herodias</i>	1	SW	100	100+	N	Passing
Chris Pepper	11-Apr-23	evw hawk 3		ABDU	American Black Duck	<i>Anas rubripes</i>	2	NW	250	-50	NE	Passing
Chris Pepper	13-Apr-23	evw hawk 4	11:15 AM	CORA	Common Raven	<i>Corvus corax</i>	1	NW	2000	500	NW	Soaring
Chris Pepper	13-Apr-23	evw hawk 4		BOCH	Boreal Chickadee	<i>Poecile hudsonicus</i>	2	E	0			
Chris Pepper	13-Apr-23	evw hawk 4	11:45 AM	N/A	N/A	N/A	0					No birds observed
Chris Pepper	13-Apr-23	evw hawk 4	12:15 PM	AMKE	American Kestrel	<i>Falco sparverius</i>	1	W	100			Calling
Chris Pepper	13-Apr-23	evw hawk 4	12:45 PM	CORA	Common Raven	<i>Corvus corax</i>	2	NW	1000	250+	E	Soaring
Chris Pepper	13-Apr-23	evw hawk 4		PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1	NW	0	-50	SW	Passing
Chris Pepper	13-Apr-23	evw hawk 4		AMKE	American Kestrel	<i>Falco sparverius</i>	1	N	100	-50	W	Passing
Chris Pepper	7-May-23	evw hawk 3	10:55 AM	ABDU	American Black Duck	<i>Anas rubripes</i>	1	S	0	-50	N	Passing
Chris Pepper	7-May-23	evw hawk 3		AMKE	American Kestrel	<i>Falco sparverius</i>	1	W	100	-50	N/A	Hover hunting over bog
Chris Pepper	7-May-23	evw hawk 3	11:25 AM	N/A	Gull Sp.	N/A	3	S	3000	250	N/A	Soaring
Chris Pepper	7-May-23	evw hawk 3		PUFI	Purple Finch	<i>Haemorhous purpureus</i>	1	SW	250	50	N	Passing
Chris Pepper	7-May-23	evw hawk 3		N/A	Gull Sp.	N/A	8	SW	3000	100-250	E	Passing
Chris Pepper	7-May-23	evw hawk 3		N/A	Warbler Sp.	N/A	1	W	250	50	S	Passing
Chris Pepper	7-May-23	evw hawk 3	11:55 AM	N/A	Gull Sp.	N/A	20	NE	3000	100-250	N/A	Soaring
Chris Pepper	7-May-23	evw hawk 3		AMKE	American Kestrel	<i>Falco sparverius</i>	1	E	250	-50	N/A	Hover hunting over bog
Chris Pepper	7-May-23	evw hawk 3	12:25 PM	N/A	Passering Sp.	N/A	1	NE	250	-50	SE	Passing
Chris Pepper	14-May-23	evw hawk 1	12:00 PM	RTHA	Red-tailed Hawk	<i>Buteo jamaicensis</i>	1	S	1000	50	N/A	Soaring
Chris Pepper	14-May-23	evw hawk 1	12:30 PM	RTHA	Red-tailed Hawk	<i>Buteo jamaicensis</i>	1	S	500	-50	N/A	Circling and landed near same hardwood stand.

Observer	Date	Survey Location	Survey Start Time	Species Codes	Common Name	Scientific Name	#	Bearing	Distance (m)	Pass Height (m)	Pass Direction	Comments
Chris Pepper	14-May-23	evw hawk 1	1:00 AM	N/A	N/A	N/A	0					No birds observed
Chris Pepper	14-May-23	evw hawk 1	1:30 AM	N/A	N/A	N/A	0					No birds observed
Chris Pepper	16-May-23	evw hawk 1	11:10 AM	NOHA	Northern Harrier	<i>Circus hudsonius</i>	1	S	100	-50	W	Passing
Chris Pepper	16-May-23	evw hawk 1	11:40 AM	TRES	Tree Swallow	<i>Tachycineta bicolor</i>	1	S	100	-50	N	

Table 7: 2023 Spring Migration Diurnal Watch Count Survey Results Summary - Harbour Hills Wind Project

Project # 25-11682

Common Name	Scientific Name	SARA Status	COSEWIC Status	ESA Status	NS S-Rank	Number Observed
American Black Duck	<i>Anas rubripes</i>	-	-	-	S5B,S5N	3
American Crow	<i>Corvus brachyrhynchos</i>	-	-	-	S5	4
American Kestrel	<i>Falco sparverius</i>	-	-	-	S3B,S4M	5
Bald Eagle	<i>Haliaeetus leucocephalus</i>	-	Not at Risk	-	S5?	2
Boreal Chickadee	<i>Poecile hudsonicus</i>	-	-	-	S3	2
Canada Goose	<i>Branta canadensis</i>	-	-	-	S5B,S5N	2
Common Raven	<i>Corvus corax</i>	-	-	-	S4	5
Great Blue Heron	<i>Ardea herodias</i>	-	-	-	S4B	1
Herring Gull	<i>Larus argentatus</i>	-	-	-	S4	1
Northern Harrier	<i>Circus hudsonius</i>	-	Not at Risk	-	S3B,S4M	1
Palm Warbler	<i>Setophaga palmarum</i>	-	-	-	S5B	1
Pileated Woodpecker	<i>Dryocopus pileatus</i>	-	-	-	S5	1
Purple Finch	<i>Haemorhous purpureus</i>	-	-	-	S5B,S4N	1
Red-tailed Hawk	<i>Buteo jamaicensis</i>	-	Not at Risk	-	S4	6
Rough-legged Hawk	<i>Buteo lagopus</i>	-	Not at Risk	-	S3S4N	1
Tree Swallow	<i>Tachycineta bicolor</i>	-	-	-	S4S5B	1
Gull Sp.	N/A	N/A	N/A	N/A	N/A	31
Passerine Sp.	N/A	N/A	N/A	N/A	N/A	1
Warbler Sp.	N/A	N/A	N/A	N/A	N/A	1

Table 8: 2023 Breeding Bird Point Count Survey Results - Harbour Hills Wind Project

Project # 25-11682

Observer	Date	Survey Location	Survey Start Time	Species Code	Common Name	Scientific Name	#	Distance (m)	Bearing	Flyover Height (m)	Flight Direction	Breeding Evidence ¹	Comments
Chris Pepper	8-Jun-23	evw 210	8:40 AM	REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	1	0				S	
Chris Pepper	8-Jun-23	evw 210		OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	2	100				S	
Chris Pepper	8-Jun-23	evw 210		AMRO	American Robin	<i>Turdus migratorius</i>	1	50				S	
Chris Pepper	8-Jun-23	evw 210		AMRE	American Redstart	<i>Setophaga ruticilla</i>	1	50				S	
Chris Pepper	8-Jun-23	evw 210		LEFL	Least Flycatcher	<i>Empidonax minimus</i>	1	50				S	
Chris Pepper	8-Jun-23	evw 210		WIWR	Winter Wren	<i>Troglodytes hiemalis</i>	1	50				S	
Chris Pepper	8-Jun-23	evw 210		NOPA	Northern Parula	<i>Setophaga americana</i>	1	50				S	
Chris Pepper	8-Jun-23	evw 210		PUFI	Purple Finch	<i>Haemorhous purpureus</i>	1	50				S	
Chris Pepper	9-Jun-23	evw 116	4:50 AM	FOSP	Fox Sparrow	<i>Passerella iliaca</i>	1	50				S	
Chris Pepper	9-Jun-23	evw 116		BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1	50				S	
Chris Pepper	9-Jun-23	evw 116		COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	2	50				S	
Chris Pepper	9-Jun-23	evw 116		MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	3	50				S	
Chris Pepper	9-Jun-23	evw 116		BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1	0				S	
Chris Pepper	9-Jun-23	evw 116		HETH	Hermit Thrush	<i>Catharus guttatus</i>	3	0				S	
Chris Pepper	9-Jun-23	evw 116		SWTH	Swainson's Thrush	<i>Catharus ustulatus</i>	3	50				S	
Chris Pepper	9-Jun-23	evw 116		WIWR	Winter Wren	<i>Troglodytes hiemalis</i>	2	100				S	
Chris Pepper	9-Jun-23	evw 116		YBFL	Yellow-bellied Flycatcher	<i>Empidonax flaviventris</i>	1	100				S	
Chris Pepper	9-Jun-23	evw 116		BCCH	Black-capped Chickadee	<i>Poecile atricapillus</i>	1	50				S	
Chris Pepper	9-Jun-23	evw 116		WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	3	50				S	
Chris Pepper	9-Jun-23	evw 116		GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	0				H	
Chris Pepper	9-Jun-23	evw 116		AMRE	American Redstart	<i>Setophaga ruticilla</i>	1	50				S	
Chris Pepper	9-Jun-23	evw 190	5:14 AM	YBFL	Yellow-bellied Flycatcher	<i>Empidonax flaviventris</i>	1	50				S	
Chris Pepper	9-Jun-23	evw 190		BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	2	50				S	
Chris Pepper	9-Jun-23	evw 190		OSFL	Olive-sided Flycatcher	<i>Contopus cooperi</i>	1	50				S	
Chris Pepper	9-Jun-23	evw 190		CAWA	Canada Warbler	<i>Cardellina canadensis</i>	1	100	S			S	
Chris Pepper	9-Jun-23	evw 190		WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	3	100				S	
Chris Pepper	9-Jun-23	evw 190		GHOW	Great horned Owl	<i>Bubo virginianus</i>	1	1000	NE			S	
Chris Pepper	9-Jun-23	evw 190		COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	3	100				S	
Chris Pepper	9-Jun-23	evw 190		ALFL	Alder Flycatcher	<i>Empidonax alnorum</i>	2	100				S	
Chris Pepper	9-Jun-23	evw 190		MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	2	50				S	
Chris Pepper	9-Jun-23	evw 190		PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1	50				S	
Chris Pepper	9-Jun-23	evw 190		BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1	50				S	
Chris Pepper	9-Jun-23	evw 190		SWTH	Swainson's Thrush	<i>Catharus ustulatus</i>	1	0				S	
Chris Pepper	9-Jun-23	evw 190		HETH	Hermit Thrush	<i>Catharus guttatus</i>	1	0				S	
Chris Pepper	9-Jun-23	evw 190		NAWA	Nashville Warbler	<i>Leiothlypis ruficapilla</i>	1	50				S	
Chris Pepper	9-Jun-23	evw 115	5:34 AM	YBFL	Yellow-bellied Flycatcher	<i>Empidonax flaviventris</i>	1	50				S	
Chris Pepper	9-Jun-23	evw 115		LISP	Lincoln's Sparrow	<i>Melospiza lincolni</i>	1	50				S	
Chris Pepper	9-Jun-23	evw 115		CAWA	Canada Warbler	<i>Cardellina canadensis</i>	1	0	S			S	
Chris Pepper	9-Jun-23	evw 115		BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1	50				S	
Chris Pepper	9-Jun-23	evw 115		HETH	Hermit Thrush	<i>Catharus guttatus</i>	1	100				S	
Chris Pepper	9-Jun-23	evw 115		COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	2	100				S	
Chris Pepper	9-Jun-23	evw 115		ALFL	Alder Flycatcher	<i>Empidonax alnorum</i>	1	100				S	
Chris Pepper	9-Jun-23	evw 115		BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1	0				S	
Chris Pepper	9-Jun-23	evw 115		NAWA	Nashville Warbler	<i>Leiothlypis ruficapilla</i>	1	50				S	
Chris Pepper	9-Jun-23	evw 115		PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1	50				S	
Chris Pepper	9-Jun-23	evw 115		MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	2	100				S	
Chris Pepper	9-Jun-23	evw 115		GHOW	Great Horned Owl	<i>Bubo virginianus</i>	1	1000	N			S	
Chris Pepper	9-Jun-23	evw 115		AMRO	American Robin	<i>Turdus migratorius</i>	1	100				S	
Chris Pepper	9-Jun-23	evw 115		YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1	100				S	
Chris Pepper	9-Jun-23	evw 115		WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	2	100				S	
Chris Pepper	9-Jun-23	evw 115		CORA	Common Raven	<i>Corvus corax</i>	1	1000				X	
Chris Pepper	9-Jun-23	evw 114	5:53 AM	OSFL	Olive-sided Flycatcher	<i>Contopus cooperi</i>	1	100				S	
Chris Pepper	9-Jun-23	evw 114		LISP	Lincoln's Sparrow	<i>Melospiza lincolni</i>	2	50				S	
Chris Pepper	9-Jun-23	evw 114		MOWA	Mourning Warbler	<i>Geothlypis philadelphia</i>	1	50				S	
Chris Pepper	9-Jun-23	evw 114		ALFL	Alder Flycatcher	<i>Empidonax alnorum</i>	2	100				S	
Chris Pepper	9-Jun-23	evw 114		YBFL	Yellow-bellied Flycatcher	<i>Empidonax flaviventris</i>	2	100				S	
Chris Pepper	9-Jun-23	evw 114		COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1	100				S	
Chris Pepper	9-Jun-23	evw 114		PIWO	Pileated Woodpecker	<i>Dryocopus pileatus</i>	2	500				H	
Chris Pepper	9-Jun-23	evw 114		GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	0				H	
Chris Pepper	9-Jun-23	evw 114		OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	1	50				S	
Chris Pepper	9-Jun-23	evw 114		DOWO	Downy Woodpecker	<i>Dryobates pubescens</i>	1	50				H	
Chris Pepper	9-Jun-23	evw 114		RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1	100	W			S	
Chris Pepper	9-Jun-23	evw 114		AMRE	American Redstart	<i>Setophaga ruticilla</i>	1	50				S	
Chris Pepper	9-Jun-23	evw 114		HETH	Hermit Thrush	<i>Catharus guttatus</i>	1	100				S	
Chris Pepper	9-Jun-23	evw 114		AMCR	American Crow	<i>Corvus brachyrhynchos</i>	1	1000				X	
Chris Pepper	9-Jun-23	evw 114		PAWA	Palm Warbler	<i>Setophaga palmarum</i>	2	100				S	
Chris Pepper	9-Jun-23	evw 114		MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	1	100				S	
Chris Pepper	9-Jun-23	evw 114		FOSP	Fox Sparrow	<i>Passerella iliaca</i>	1	250	E			S	
Chris Pepper	9-Jun-23	evw 114		YBSA	Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>	1	100				H	
Chris Pepper	9-Jun-23	evw 114		BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1	100				S	
Chris Pepper	9-Jun-23	evw 114		SWTH	Swainson's Thrush	<i>Catharus ustulatus</i>	1	100				S	
Chris Pepper	9-Jun-23	evw 114		NAWA	Nashville Warbler	<i>Leiothlypis ruficapilla</i>	1	50				S	
Chris Pepper	9-Jun-23	evw 114		CAWA	Canada Warbler	<i>Cardellina canadensis</i>	1	100	SE			S	

Table 8: 2023 Breeding Bird Point Count Survey Results - Harbour Hills Wind Project

Observer	Date	Survey Location	Survey Start Time	Species Code	Common Name	Scientific Name	#	Distance (m)	Bearing	Flyover Height (m)	Flight Direction	Breeding Evidence ¹	Comments
Chris Pepper	9-Jun-23	evw 114	6:12 AM	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1	100				S	
Chris Pepper	9-Jun-23	evw 114		WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	2	100				S	
Chris Pepper	9-Jun-23	evw 210		BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1	0				S	
Chris Pepper	9-Jun-23	evw 210		GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	2	0				H	
Chris Pepper	9-Jun-23	evw 210		HAWO	Hairy Woodpecker	<i>Dryobates villosus</i>	1	100				H	
Chris Pepper	9-Jun-23	evw 210		HETH	Hermit Thrush	<i>Catharus guttatus</i>	2	100				S	
Chris Pepper	9-Jun-23	evw 210		BOCH	Boreal Chickadee	<i>Poecile hudsonicus</i>	1	50				H	
Chris Pepper	9-Jun-23	evw 210		CAWA	Canada Warbler	<i>Cardellina canadensis</i>	1	50				S	
Chris Pepper	9-Jun-23	evw 210		YBFL	Yellow-bellied Flycatcher	<i>Empidonax flaviventris</i>	2	50				S	
Chris Pepper	9-Jun-23	evw 210		CAWA	Canada Warbler	<i>Cardellina canadensis</i>	1	0	NW			S	
Chris Pepper	9-Jun-23	evw 210		AMRO	American Robin	<i>Turdus migratorius</i>	1	100				S	
Chris Pepper	9-Jun-23	evw 210		MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	1	50				S	
Chris Pepper	9-Jun-23	evw 210		OSFL	Olive-sided Flycatcher	<i>Contopus cooperi</i>	1	100				S	
Chris Pepper	9-Jun-23	evw 210		ALFL	Alder Flycatcher	<i>Empidonax alnorum</i>	2	50				S	
Chris Pepper	9-Jun-23	evw 210		NAWA	Nashville Warbler	<i>Leiothlypis ruficapilla</i>	1	50				S	
Chris Pepper	9-Jun-23	evw 210		DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1	0				S	
Chris Pepper	9-Jun-23	evw 210		WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1	100				S	
Chris Pepper	9-Jun-23	evw 210		RUBL	Rusty Blackbird	<i>Euphagus carolinus</i>	2	0	SW			S	
Chris Pepper	9-Jun-23	evw 210		AMRE	American Redstart	<i>Setophaga ruticilla</i>	3	0				S	
Chris Pepper	9-Jun-23	evw 210		PAWA	Palm Warbler	<i>Setophaga palmarum</i>	2	0				S	
Chris Pepper	9-Jun-23	evw 210		BLJA	Blue Jay	<i>Cyanocitta cristata</i>	1	0				S	
Chris Pepper	9-Jun-23	evw 210		OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	1	100				S	
Chris Pepper	9-Jun-23	evw 210		COLO	Common Loon	<i>Gavia immer</i>	1	1000				X	
Chris Pepper	9-Jun-23	evw 210		SWSP	Swamp Sparrow	<i>Melospiza georgiana</i>	1	0				S	
Chris Pepper	9-Jun-23	evw 210		RECR	Red Crossbill	<i>Loxia curvirostra</i>	3	0	W	100	E	Flying	
Chris Pepper	9-Jun-23	evw 210		GRYE	Greater Yellowlegs	<i>Tringa melanoleuca</i>	1	500	S			S	
Chris Pepper	9-Jun-23	evw 210		RTHU	Ruby-throated Hummingbird	<i>Archilochus colubris</i>	1	0				H	
Chris Pepper	9-Jun-23	evw 210		COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	2	100				S	
Chris Pepper	9-Jun-23	evw 210		BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	2	0				S	
Chris Pepper	9-Jun-23	evw 210		BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1	0				S	
Chris Pepper	9-Jun-23	evw 117	6:36 AM	YBSA	Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>	1	50				S	
Chris Pepper	9-Jun-23	evw 117		MOWA	Mourning Warbler	<i>Geothlypis philadelphia</i>	1	50				S	
Chris Pepper	9-Jun-23	evw 117		YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1	50				S	
Chris Pepper	9-Jun-23	evw 117		BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1	50				S	
Chris Pepper	9-Jun-23	evw 117		BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	2	50				S	
Chris Pepper	9-Jun-23	evw 117		MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	2	50				S	
Chris Pepper	9-Jun-23	evw 117		SWTH	Swainson's Thrush	<i>Catharus ustulatus</i>	1	100				S	
Chris Pepper	9-Jun-23	evw 117		AMRE	American Redstart	<i>Setophaga ruticilla</i>	2	100				S	
Chris Pepper	9-Jun-23	evw 117		OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	2	100				S	
Chris Pepper	9-Jun-23	evw 117		AMRO	American Robin	<i>Turdus migratorius</i>	1	100				S	
Chris Pepper	9-Jun-23	evw 117		REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	1	100				S	
Chris Pepper	9-Jun-23	evw 117		WISN	Wilson's Snipe	<i>Gallinago delicata</i>	1	100				H	
Chris Pepper	9-Jun-23	evw 117		HETH	Hermit Thrush	<i>Catharus guttatus</i>	1	100				S	
Chris Pepper	9-Jun-23	evw 117		GRYE	Greater Yellowlegs	<i>Tringa melanoleuca</i>	1	250				H	
Chris Pepper	9-Jun-23	evw 117		WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1	50				S	
Chris Pepper	9-Jun-23	evw 117		AMCR	American Crow	<i>Corvus brachyrhynchos</i>	1	500				H	
Chris Pepper	9-Jun-23	evw 118	6:50 AM	BBWA	Bay-breasted Warbler	<i>Setophaga castanea</i>	2	0				S	
Chris Pepper	9-Jun-23	evw 118		CAWA	Canada Warbler	<i>Cardellina canadensis</i>	1	250	SE			S	
Chris Pepper	9-Jun-23	evw 118		BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1	100				S	
Chris Pepper	9-Jun-23	evw 118		MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	3	50				S	
Chris Pepper	9-Jun-23	evw 118		BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	2	0				S	
Chris Pepper	9-Jun-23	evw 118		WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	2	0				S	
Chris Pepper	9-Jun-23	evw 118		COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1	100				S	
Chris Pepper	9-Jun-23	evw 118		YBFL	Yellow-bellied Flycatcher	<i>Empidonax flaviventris</i>	1	100				S	
Chris Pepper	9-Jun-23	evw 118		RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1	0	N			S	
Chris Pepper	9-Jun-23	evw 118		YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1	100				S	
Chris Pepper	9-Jun-23	evw 118		BLJA	Blue Jay	<i>Cyanocitta cristata</i>	1	100				H	
Chris Pepper	9-Jun-23	evw 118		DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1	0				H	
Chris Pepper	9-Jun-23	evw 118		AMRE	American Redstart	<i>Setophaga ruticilla</i>	1	0				S	
Chris Pepper	9-Jun-23	evw 118		COLO	Common Loon	<i>Gavia immer</i>	1	1000	W			X	
Chris Pepper	9-Jun-23	evw 118		HETH	Hermit Thrush	<i>Catharus guttatus</i>	1	100				S	
Chris Pepper	9-Jun-23	evw 118		BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1	50				S	
Chris Pepper	9-Jun-23	evw 118		ALFL	Alder Flycatcher	<i>Empidonax alnorum</i>	2	100				S	
Chris Pepper	9-Jun-23	evw 118		GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	0				S	
Chris Pepper	9-Jun-23	evw 118		MOWA	Mourning Warbler	<i>Geothlypis philadelphia</i>	1	0				S	
Chris Pepper	9-Jun-23	evw 130	7:05 AM	CAWA	Canada Warbler	<i>Cardellina canadensis</i>	1	100	SE			S	
Chris Pepper	9-Jun-23	evw 130		YBFL	Yellow-bellied Flycatcher	<i>Empidonax flaviventris</i>	2	100				S	
Chris Pepper	9-Jun-23	evw 130		DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1	100				H	
Chris Pepper	9-Jun-23	evw 130		PAWA	Palm Warbler	<i>Setophaga palmarum</i>	2	100				S	
Chris Pepper	9-Jun-23	evw 130		BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	2	50				S	
Chris Pepper	9-Jun-23	evw 130		BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1	50				S	
Chris Pepper	9-Jun-23	evw 130		MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	1	50				S	
Chris Pepper	9-Jun-23	evw 130		COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	3	0				S	

Table 8: 2023 Breeding Bird Point Count Survey Results - Harbour Hills Wind Project

Observer	Date	Survey Location	Survey Start Time	Species Code	Common Name	Scientific Name	#	Distance (m)	Bearing	Flyover Height (m)	Flight Direction	Breeding Evidence ¹	Comments
Chris Pepper	9-Jun-23	evw 130		WIWR	Winter Wren	<i>Troglodytes hiemalis</i>	1	100				S	
Chris Pepper	9-Jun-23	evw 130		BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1	100				S	
Chris Pepper	9-Jun-23	evw 130		RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1	100	N			S	
Chris Pepper	9-Jun-23	evw 130		WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	2	100				S	
Chris Pepper	9-Jun-23	evw 130		OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	1	250				S	
Chris Pepper	9-Jun-23	evw 130		NOWA	Northern Waterthrush	<i>Parkesia noveboracensis</i>	1	100				S	
Chris Pepper	9-Jun-23	evw 130		BCCH	Black-capped Chickadee	<i>Poecile atricapillus</i>	1	100				S	
Chris Pepper	9-Jun-23	evw 131	7:22 AM	NOFL	Northern Flicker	<i>Colaptes auratus</i>	1	100				H	
Chris Pepper	9-Jun-23	evw 131		NAWA	Nashville Warbler	<i>Leiothlypis ruficapilla</i>	1	50				S	
Chris Pepper	9-Jun-23	evw 131		YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1	100				S	
Chris Pepper	9-Jun-23	evw 131		HETH	Hermit Thrush	<i>Catharus guttatus</i>	1	100				S	
Chris Pepper	9-Jun-23	evw 131		SWTH	Swainson's Thrush	<i>Catharus ustulatus</i>	2	100				S	
Chris Pepper	9-Jun-23	evw 131		CAWA	Canada Warbler	<i>Cardellina canadensis</i>	1	100	N			S	
Chris Pepper	9-Jun-23	evw 131		BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	2	100				S	
Chris Pepper	9-Jun-23	evw 131		COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1	50				S	
Chris Pepper	9-Jun-23	evw 131		AMRE	American Redstart	<i>Setophaga ruticilla</i>	1	100				S	
Chris Pepper	9-Jun-23	evw 131		MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	2	100				S	
Chris Pepper	9-Jun-23	evw 131		WIWR	Winter Wren	<i>Troglodytes hiemalis</i>	1	100				S	
Chris Pepper	9-Jun-23	evw 131		YBFL	Yellow-bellied Flycatcher	<i>Empidonax flaviventris</i>	2	50				S	
Chris Pepper	9-Jun-23	evw 131		WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	2	50				S	
Chris Pepper	9-Jun-23	evw 131		BBWO	Black-backed Woodpecker	<i>Picoides arcticus</i>	1	50	W			H	
Chris Pepper	9-Jun-23	evw 131		CMWA	Cape May Warbler	<i>Setophaga tigrina</i>	1	0	E			S	
Chris Pepper	9-Jun-23	evw 131		LISP	Lincoln's Sparrow	<i>Melospiza lincolni</i>	1	0				S	
Chris Pepper	9-Jun-23	evw 131		BBWA	Bay-breasted Warbler	<i>Setophaga castanea</i>	1	50	N			S	
Chris Pepper	9-Jun-23	evw 131		BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1	0				S	
Chris Pepper	9-Jun-23	evw 131		GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	0				S	
Chris Pepper	9-Jun-23	evw 131		PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1	50				S	
Chris Pepper	9-Jun-23	evw 131		BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1	100				S	
Chris Pepper	9-Jun-23	evw 132	7:43 AM	AMGO	American Goldfinch	<i>Spinus tristis</i>	1	0				S	
Chris Pepper	9-Jun-23	evw 132		GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	100				S	
Chris Pepper	9-Jun-23	evw 132		COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	2	50				S	
Chris Pepper	9-Jun-23	evw 132		BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1	0				S	
Chris Pepper	9-Jun-23	evw 132		REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	1	100				S	
Chris Pepper	9-Jun-23	evw 132		PAWA	Palm Warbler	<i>Setophaga palmarum</i>	2	50				S	
Chris Pepper	9-Jun-23	evw 132		MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	1	50				S	
Chris Pepper	9-Jun-23	evw 132		RUGR	Ruffed Grouse	<i>Bonasa umbellus</i>	1	50				H	
Chris Pepper	9-Jun-23	evw 132		COME	Common Merganser	<i>Mergus merganser</i>	1	100				H	
Chris Pepper	9-Jun-23	evw 132		NOWA	Northern Waterthrush	<i>Parkesia noveboracensis</i>	1	250				S	
Chris Pepper	9-Jun-23	evw 132		RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1	100	W			S	
Chris Pepper	9-Jun-23	evw 132		AMRE	American Redstart	<i>Setophaga ruticilla</i>	3	0				S	
Chris Pepper	9-Jun-23	evw 132		PUFI	Purple Finch	<i>Haemorhous purpureus</i>	1	100				S	
Chris Pepper	9-Jun-23	evw 132		SWTH	Swainson's Thrush	<i>Catharus ustulatus</i>	1	100				S	
Chris Pepper	9-Jun-23	evw 132		WIWR	Winter Wren	<i>Troglodytes hiemalis</i>	2	100				S	
Chris Pepper	9-Jun-23	evw 132		YBFL	Yellow-bellied Flycatcher	<i>Empidonax flaviventris</i>	1	50				S	
Chris Pepper	9-Jun-23	evw 132		MOWA	Mourning Warbler	<i>Geothlypis philadelphia</i>	1	50				S	
Chris Pepper	9-Jun-23	evw 132		BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1	50				S	
Chris Pepper	9-Jun-23	evw 123	8:00 AM	YBFL	Yellow-bellied Flycatcher	<i>Empidonax flaviventris</i>	2	50				S	
Chris Pepper	9-Jun-23	evw 123		CAWA	Canada Warbler	<i>Cardellina canadensis</i>	1	100	N			S	
Chris Pepper	9-Jun-23	evw 123		RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1	100	N			S	
Chris Pepper	9-Jun-23	evw 123		OSFL	Olive-sided Flycatcher	<i>Contopus cooperi</i>	1	250	N			S	
Chris Pepper	9-Jun-23	evw 123		MOWA	Mourning Warbler	<i>Geothlypis philadelphia</i>	1	50				S	
Chris Pepper	9-Jun-23	evw 123		REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	1	100				S	
Chris Pepper	9-Jun-23	evw 123		BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	2	100				S	
Chris Pepper	9-Jun-23	evw 123		BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1	100				S	
Chris Pepper	9-Jun-23	evw 123		PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1	50				S	
Chris Pepper	9-Jun-23	evw 123		MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	1	50				S	
Chris Pepper	9-Jun-23	evw 123		WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1	100				S	
Chris Pepper	9-Jun-23	evw 123		HETH	Hermit Thrush	<i>Catharus guttatus</i>	1	100				S	
Chris Pepper	9-Jun-23	evw 123		AMCR	American Crow	<i>Corvus brachyrhynchos</i>	1	500				X	
Chris Pepper	9-Jun-23	evw 123		HAWO	Hairy Woodpecker	<i>Dryobates villosus</i>	1	100				H	
Chris Pepper	9-Jun-23	evw 123		BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1	50				S	
Chris Pepper	9-Jun-23	evw 123		SWTH	Swainson's Thrush	<i>Catharus ustulatus</i>	1	100				S	
Chris Pepper	9-Jun-23	evw 123		YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1	50				S	
Chris Pepper	9-Jun-23	evw 124	8:14 AM	HETH	Hermit Thrush	<i>Catharus guttatus</i>	2	100				S	
Chris Pepper	9-Jun-23	evw 124		LEFL	Least Flycatcher	<i>Empidonax minimus</i>	2	0				S	
Chris Pepper	9-Jun-23	evw 124		AMRE	American Redstart	<i>Setophaga ruticilla</i>	2	0				S	
Chris Pepper	9-Jun-23	evw 124		BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1	100				S	
Chris Pepper	9-Jun-23	evw 124		REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	1	100				S	
Chris Pepper	9-Jun-23	evw 124		MOWA	Mourning Warbler	<i>Geothlypis philadelphia</i>	2	100				S	
Chris Pepper	9-Jun-23	evw 124		AMRO	American Robin	<i>Turdus migratorius</i>	1	100				S	
Chris Pepper	9-Jun-23	evw 124		DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1	100				S	
Chris Pepper	9-Jun-23	evw 124		YBFL	Yellow-bellied Flycatcher	<i>Empidonax flaviventris</i>	1	100				S	
Chris Pepper	9-Jun-23	evw 124		MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	2	50				S	

Table 8: 2023 Breeding Bird Point Count Survey Results - Harbour Hills Wind Project

Project # 25-11682

Observer	Date	Survey Location	Survey Start Time	Species Code	Common Name	Scientific Name	#	Distance (m)	Bearing	Flyover Height (m)	Flight Direction	Breeding Evidence ¹	Comments
Chris Pepper	9-Jun-23	evw 124		BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1	100				S	
Chris Pepper	9-Jun-23	evw 124		WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1	100				S	
Chris Pepper	9-Jun-23	evw 124		COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1	100				S	
Chris Pepper	9-Jun-23	evw 124		NOWA	Northern Waterthrush	<i>Parquesia noveboracensis</i>	1	100				S	
Chris Pepper	9-Jun-23	evw 124		BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1	50				S	
Chris Pepper	9-Jun-23	evw 124		GRYE	Greater Yellowlegs	<i>Tringa melanoleuca</i>	1	500	N			S	
Chris Pepper	9-Jun-23	evw 124		HAWO	Hairy Woodpecker	<i>Dryobates villosus</i>	1	100				H	
Chris Pepper	9-Jun-23	evw 124		BOCH	Boreal Chickadee	<i>Poecile hudsonicus</i>	1	0	W			H	
Chris Pepper	9-Jun-23	evw 128	8:27 AM	BCCH	Black-capped Chickadee	<i>Poecile atricapillus</i>	1	50				S	
Chris Pepper	9-Jun-23	evw 128		MOWA	Mourning Warbler	<i>Geothlypis philadelphia</i>	1	100				S	
Chris Pepper	9-Jun-23	evw 128		AMRE	American Redstart	<i>Setophaga ruticilla</i>	2	50				S	
Chris Pepper	9-Jun-23	evw 128		YBFL	Yellow-bellied Flycatcher	<i>Empidonax flaviventris</i>	2	100				S	
Chris Pepper	9-Jun-23	evw 128		DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1	0				NB	Carrying nest building material
Chris Pepper	9-Jun-23	evw 128		YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1	50				S	
Chris Pepper	9-Jun-23	evw 128		PAWA	Palm Warbler	<i>Setophaga palmarum</i>	2	0				S	
Chris Pepper	9-Jun-23	evw 128		OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	2	100				S	
Chris Pepper	9-Jun-23	evw 128		NAWA	Nashville Warbler	<i>Leiothlypis ruficapilla</i>	1	50				S	
Chris Pepper	9-Jun-23	evw 128		COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1	100				S	
Chris Pepper	9-Jun-23	evw 128		CAWA	Canada Warbler	<i>Cardellina canadensis</i>	1	100	W			S	
Chris Pepper	9-Jun-23	evw 128		WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	2	0				S	
Chris Pepper	9-Jun-23	evw 128		NOFL	Northern Flicker	<i>Colaptes auratus</i>	1	100				H	
Chris Pepper	9-Jun-23	evw 128		RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1	100	SW			S	
Chris Pepper	9-Jun-23	evw 125	8:43 AM	CAWA	Canada Warbler	<i>Cardellina canadensis</i>	1	50	SW			S	
Chris Pepper	9-Jun-23	evw 125		CAWA	Canada Warbler	<i>Cardellina canadensis</i>	1	50	NW			S	
Chris Pepper	9-Jun-23	evw 125		CAWA	Canada Warbler	<i>Cardellina canadensis</i>	1	100	S			S	
Chris Pepper	9-Jun-23	evw 125		YBFL	Yellow-bellied Flycatcher	<i>Empidonax flaviventris</i>	2	50				S	
Chris Pepper	9-Jun-23	evw 125		HETH	Hermit Thrush	<i>Catharus guttatus</i>	1	50				H	
Chris Pepper	9-Jun-23	evw 125		OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	1	100				S	
Chris Pepper	9-Jun-23	evw 125		AMRO	American Robin	<i>Turdus migratorius</i>	1	100				H	
Chris Pepper	9-Jun-23	evw 125		COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1	0				S	
Chris Pepper	9-Jun-23	evw 125		MOWA	Mourning Warbler	<i>Geothlypis philadelphia</i>	1	100				S	
Chris Pepper	9-Jun-23	evw 125		DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1	0				S	
Chris Pepper	9-Jun-23	evw 125		WIWR	Winter Wren	<i>Troglodytes hiemalis</i>	1	100				S	
Chris Pepper	9-Jun-23	evw 125		BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1	50				S	
Chris Pepper	9-Jun-23	evw 125		MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	2	50				S	
Chris Pepper	9-Jun-23	evw 125		WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	2	100				S	
Chris Pepper	9-Jun-23	evw 125		PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1	50				S	
Chris Pepper	9-Jun-23	evw 125		GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	0				S	
Chris Pepper	9-Jun-23	evw 125		BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1	100				S	
Chris Pepper	9-Jun-23	evw 109	9:16 AM	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	2	100				S	
Chris Pepper	9-Jun-23	evw 109		BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1	100				S	
Chris Pepper	9-Jun-23	evw 109		WIWR	Winter Wren	<i>Troglodytes hiemalis</i>	1	100				S	
Chris Pepper	9-Jun-23	evw 109		CONI	Common Nighthawk	<i>Chordeiles minor</i>	1	250	E			D	Boom and peent
Chris Pepper	9-Jun-23	evw 109		MOWA	Mourning Warbler	<i>Geothlypis philadelphia</i>	1	100				S	
Chris Pepper	9-Jun-23	evw 109		RUGR	Ruffed Grouse	<i>Bonasa umbellus</i>	1	0				D	
Chris Pepper	9-Jun-23	evw 109		BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1	0				S	
Chris Pepper	9-Jun-23	evw 109		AMRE	American Redstart	<i>Setophaga ruticilla</i>	1	0				S	
Chris Pepper	9-Jun-23	evw 109		OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	2	0				S	
Chris Pepper	9-Jun-23	evw 109		REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	2	50				S	
Chris Pepper	9-Jun-23	evw 109		HETH	Hermit Thrush	<i>Catharus guttatus</i>	1	100				S	
Chris Pepper	9-Jun-23	evw 109		SWTH	Swainson's Thrush	<i>Catharus ustulatus</i>	1	100				S	
Chris Pepper	9-Jun-23	evw 109		COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	2	0				S	
Chris Pepper	9-Jun-23	evw 109		YBSA	Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>	2	100				H	
Chris Pepper	9-Jun-23	evw 109		WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1	100				S	
Chris Pepper	9-Jun-23	evw 109		NOPA	Northern Parula	<i>Setophaga americana</i>	1	100				S	
Chris Pepper	9-Jun-23	evw 108	9:33 AM	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	2	0				S	
Chris Pepper	9-Jun-23	evw 108		BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	3	0				S	
Chris Pepper	9-Jun-23	evw 108		OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	3	50				S	
Chris Pepper	9-Jun-23	evw 108		RUGR	Ruffed Grouse	<i>Bonasa umbellus</i>	1	0				D	
Chris Pepper	9-Jun-23	evw 108		BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1	0				S	
Chris Pepper	9-Jun-23	evw 108		HAWO	Hairy Woodpecker	<i>Dryobates villosus</i>	1	50				H	
Chris Pepper	9-Jun-23	evw 108		REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	1	100				S	
Chris Pepper	10-Jun-23	evw 138	4:46 AM	HETH	Hermit Thrush	<i>Catharus guttatus</i>	3	0				S	
Chris Pepper	10-Jun-23	evw 138		WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	2	100				S	
Chris Pepper	10-Jun-23	evw 138		BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	2	50				S	
Chris Pepper	10-Jun-23	evw 138		PAWA	Palm Warbler	<i>Setophaga palmarum</i>	2	50				S	
Chris Pepper	10-Jun-23	evw 138		YBFL	Yellow-bellied Flycatcher	<i>Empidonax flaviventris</i>	3	100				S	
Chris Pepper	10-Jun-23	evw 138		COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	2	50				S	
Chris Pepper	10-Jun-23	evw 138		MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	1	50				S	
Chris Pepper	10-Jun-23	evw 138		SWTH	Swainson's Thrush	<i>Catharus ustulatus</i>	1	50				S	
Chris Pepper	10-Jun-23	evw 138		RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1	100	N			S	
Chris Pepper	10-Jun-23	evw 138		LISP	Lincoln's Sparrow	<i>Melospiza lincolnii</i>	1	50				S	

Table 8: 2023 Breeding Bird Point Count Survey Results - Harbour Hills Wind Project

Observer	Date	Survey Location	Survey Start Time	Species Code	Common Name	Scientific Name	#	Distance (m)	Bearing	Flyover Height (m)	Flight Direction	Breeding Evidence ¹	Comments	
Chris Pepper	10-Jun-23	evw 138	5:02 AM	AMRE	American Redstart	<i>Setophaga ruticilla</i>	1	100				S		
Chris Pepper	10-Jun-23	evw 137		MOWA	Mourning Warbler	<i>Geothlypis philadelphia</i>	1	50				S		
Chris Pepper	10-Jun-23	evw 137		YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1	0				S		
Chris Pepper	10-Jun-23	evw 137		YBFL	Yellow-bellied Flycatcher	<i>Empidonax flaviventris</i>	3	50				S		
Chris Pepper	10-Jun-23	evw 137	5:16 AM	SWTH	Swainson's Thrush	<i>Catharus ustulatus</i>	2	100				S		
Chris Pepper	10-Jun-23	evw 137		WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	3	50				S		
Chris Pepper	10-Jun-23	evw 137		DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1	50				S		
Chris Pepper	10-Jun-23	evw 137		HETH	Hermit Thrush	<i>Catharus guttatus</i>	1	50				S		
Chris Pepper	10-Jun-23	evw 137		BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1	50				S		
Chris Pepper	10-Jun-23	evw 137		MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	3	0				S		
Chris Pepper	10-Jun-23	evw 137		GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	50				S		
Chris Pepper	10-Jun-23	evw 137		AMRE	American Redstart	<i>Setophaga ruticilla</i>	1	100				S		
Chris Pepper	10-Jun-23	evw 137		COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1	0				S		
Chris Pepper	10-Jun-23	evw 137		PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1	0				S		
Chris Pepper	10-Jun-23	evw 136		NAWA	Nashville Warbler	<i>Leiothlypis ruficapilla</i>	1	50				S		
Chris Pepper	10-Jun-23	evw 136		LISP	Lincoln's Sparrow	<i>Melospiza lincolni</i>	2	50				S		
Chris Pepper	10-Jun-23	evw 136		RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1	100				S		
Chris Pepper	10-Jun-23	evw 136		BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	2	100				S		
Chris Pepper	10-Jun-23	evw 136		COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	4	100				S		
Chris Pepper	10-Jun-23	evw 136	5:31 AM	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	2	0				S		
Chris Pepper	10-Jun-23	evw 136		YBFL	Yellow-bellied Flycatcher	<i>Empidonax flaviventris</i>	2	50				S		
Chris Pepper	10-Jun-23	evw 136		PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1	100				S		
Chris Pepper	10-Jun-23	evw 136		GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	0				S		
Chris Pepper	10-Jun-23	evw 136		HETH	Hermit Thrush	<i>Catharus guttatus</i>	2	100				S		
Chris Pepper	10-Jun-23	evw 136		OSFL	Olive-sided Flycatcher	<i>Contopus cooperi</i>	1	250	E			S		
Chris Pepper	10-Jun-23	evw 136		COLO	Common Loon	<i>Gavia immer</i>	1	1000	N			X		
Chris Pepper	10-Jun-23	evw 136		GRYE	Greater Yellowlegs	<i>Tringa melanoleuca</i>	1	500	SE			S		
Chris Pepper	10-Jun-23	evw 136		MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	1	100				S		
Chris Pepper	10-Jun-23	evw 136		WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1	100				S		
Chris Pepper	10-Jun-23	evw 136		BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1	100				S		
Chris Pepper	10-Jun-23	evw 136		WIWR	Winter Wren	<i>Troglodytes hiemalis</i>	1	100				S		
Chris Pepper	10-Jun-23	evw 136		DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1	100				S		
Chris Pepper	10-Jun-23	evw 135		NAWA	Nashville Warbler	<i>Leiothlypis ruficapilla</i>	1	50				S		
Chris Pepper	10-Jun-23	evw 135		COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	2	0				S		
Chris Pepper	10-Jun-23	evw 135	5:44 AM	PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1	50				S		
Chris Pepper	10-Jun-23	evw 135		YBFL	Yellow-bellied Flycatcher	<i>Empidonax flaviventris</i>	2	50				S		
Chris Pepper	10-Jun-23	evw 135		BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	2	0				S		
Chris Pepper	10-Jun-23	evw 135		GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	0				S		
Chris Pepper	10-Jun-23	evw 135		MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	2	50				S		
Chris Pepper	10-Jun-23	evw 135		BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1	100				S		
Chris Pepper	10-Jun-23	evw 135		DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	2	50				S		
Chris Pepper	10-Jun-23	evw 135		YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1	0				H		
Chris Pepper	10-Jun-23	evw 135		WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	2	100				S		
Chris Pepper	10-Jun-23	evw 135		HETH	Hermit Thrush	<i>Catharus guttatus</i>	1	0				H		
Chris Pepper	10-Jun-23	evw 135		MOWA	Mourning Warbler	<i>Geothlypis philadelphia</i>	2	100				S		
Chris Pepper	10-Jun-23	evw 135		N/A	Woodpecker Sp.	N/A	1	250				H		
Chris Pepper	10-Jun-23	evw 135		RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1	50	N			S		
Chris Pepper	10-Jun-23	evw 135		COLO	Common Loon	<i>Gavia immer</i>	1	1000				H		
Chris Pepper	10-Jun-23	evw 133		COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	2	0				S		
Chris Pepper	10-Jun-23	evw 133	5:57 AM	YBFL	Yellow-bellied Flycatcher	<i>Empidonax flaviventris</i>	2	50				S		
Chris Pepper	10-Jun-23	evw 133		BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1	50				S		
Chris Pepper	10-Jun-23	evw 133		GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	0				S		
Chris Pepper	10-Jun-23	evw 133		YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1	50				S		
Chris Pepper	10-Jun-23	evw 133		HETH	Hermit Thrush	<i>Catharus guttatus</i>	2	100				S		
Chris Pepper	10-Jun-23	evw 133		MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	3	0				S		
Chris Pepper	10-Jun-23	evw 133		GWTE	Green-winged Teal	<i>Anas crecca</i>	2	0	W	-50	E	Flying		
Chris Pepper	10-Jun-23	evw 133		CAWA	Canada Warbler	<i>Cardellina canadensis</i>	1	100	E?			S		
Chris Pepper	10-Jun-23	evw 133		MOWA	Mourning Warbler	<i>Geothlypis philadelphia</i>	1	100				S		
Chris Pepper	10-Jun-23	evw 133		AMRE	American Redstart	<i>Setophaga ruticilla</i>	1	100				S		
Chris Pepper	10-Jun-23	evw 133		SWTH	Swainson's Thrush	<i>Catharus ustulatus</i>	1	100				S		
Chris Pepper	10-Jun-23	evw 133		N/A	Woodpecker Sp.	N/A	1	250				H		
Chris Pepper	10-Jun-23	evw 133		WIWR	Winter Wren	<i>Troglodytes hiemalis</i>	1	100				S		
Chris Pepper	10-Jun-23	evw 132		MOWA	Mourning Warbler	<i>Geothlypis philadelphia</i>	2	0				S		
Chris Pepper	10-Jun-23	evw 132		RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1	50				S		
Chris Pepper	10-Jun-23	evw 132	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1	50				S			
Chris Pepper	10-Jun-23	evw 132	BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1	0				S			
Chris Pepper	10-Jun-23	evw 132		AMRE	American Redstart	<i>Setophaga ruticilla</i>	1	50				S		
Chris Pepper	10-Jun-23	evw 132		COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1	50				S		
Chris Pepper	10-Jun-23	evw 132		NOPA	Northern Parula	<i>Setophaga americana</i>	1	50				S		
Chris Pepper	10-Jun-23	evw 132		OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	2	100				S		
Chris Pepper	10-Jun-23	evw 132		AMRE	American Redstart	<i>Setophaga ruticilla</i>	1	50				S		
Chris Pepper	10-Jun-23	evw 132		WIWR	Winter Wren	<i>Troglodytes hiemalis</i>	1	100				S		
Chris Pepper	10-Jun-23	evw 132		BCCH	Black-capped Chickadee	<i>Poecile atricapillus</i>	1	50				S		

Table 8: 2023 Breeding Bird Point Count Survey Results - Harbour Hills Wind Project

Observer	Date	Survey Location	Survey Start Time	Species Code	Common Name	Scientific Name	#	Distance (m)	Bearing	Flyover Height (m)	Flight Direction	Breeding Evidence ¹	Comments
Chris Pepper	10-Jun-23	evw 132		BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	2	50				S	
Chris Pepper	10-Jun-23	evw 132		YBFL	Yellow-bellied Flycatcher	<i>Empidonax flaviventris</i>	1	100				H	
Chris Pepper	10-Jun-23	evw 132		MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	1	50				S	
Chris Pepper	10-Jun-23	evw 132		DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1	50				H	
Chris Pepper	10-Jun-23	evw 132		N/A	Woodpecker Sp.	N/A	1	250				H	
Chris Pepper	10-Jun-23	evw 132		NAWA	Nashville Warbler	<i>Leiothlypis ruficapilla</i>	1	50				S	
Chris Pepper	10-Jun-23	evw 132		PUFI	Purple Finch	<i>Haemorhous purpureus</i>	1	50				S	
Chris Pepper	10-Jun-23	evw 132		HETH	Hermit Thrush	<i>Catharus guttatus</i>	1	100				S	
Chris Pepper	10-Jun-23	evw 132		PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1	0				S	
Chris Pepper	10-Jun-23	evw 105	6:18 AM	NOWA	Northern Waterthrush	<i>Parkesia noveboracensis</i>	1	0				S	
Chris Pepper	10-Jun-23	evw 105		AMRE	American Redstart	<i>Setophaga ruticilla</i>	2	0				S	
Chris Pepper	10-Jun-23	evw 105		BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1	0				S	
Chris Pepper	10-Jun-23	evw 105		AMRO	American Robin	<i>Turdus migratorius</i>	1	100				H	
Chris Pepper	10-Jun-23	evw 105		MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	1	0				S	
Chris Pepper	10-Jun-23	evw 105		BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1	100				S	
Chris Pepper	10-Jun-23	evw 105		OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	2	50				S	
Chris Pepper	10-Jun-23	evw 105		CAWA	Canada Warbler	<i>Cardellina canadensis</i>	1	100	SE			S	
Chris Pepper	10-Jun-23	evw 105		BLBW	Blackburnian Warbler	<i>Setophaga fusca</i>	2	50				S	
Chris Pepper	10-Jun-23	evw 105		LEFL	Least Flycatcher	<i>Empidonax minimus</i>	1	100				S	
Chris Pepper	10-Jun-23	evw 105		YBSA	Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>	1	100				H	
Chris Pepper	10-Jun-23	evw 105		HAWO	Hairy Woodpecker	<i>Dryobates villosus</i>	1	100				H	
Chris Pepper	10-Jun-23	evw 106	6:31 AM	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1	50				S	
Chris Pepper	10-Jun-23	evw 106		HETH	Hermit Thrush	<i>Catharus guttatus</i>	1	100				S	
Chris Pepper	10-Jun-23	evw 106		BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1	100				S	
Chris Pepper	10-Jun-23	evw 106		OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	1	0				S	
Chris Pepper	10-Jun-23	evw 106		WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1	100				S	
Chris Pepper	10-Jun-23	evw 106		YBFL	Yellow-bellied Flycatcher	<i>Empidonax flaviventris</i>	1	50				S	
Chris Pepper	10-Jun-23	evw 106		YBSA	Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>	1	250				H	
Chris Pepper	10-Jun-23	evw 106		COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1	50				S	
Chris Pepper	10-Jun-23	evw 106		MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	1	50				S	
Chris Pepper	10-Jun-23	evw 106		BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1	100				S	
Chris Pepper	10-Jun-23	evw 106		YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1	100				S	
Chris Pepper	10-Jun-23	evw 106		AMCR	American Crow	<i>Corvus brachyrhynchos</i>	1	500				X	
Chris Pepper	10-Jun-23	evw 106		BLJA	Blue Jay	<i>Cyanocitta cristata</i>	1	0				H	
Chris Pepper	10-Jun-23	evw 106		PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1	100				S	
Chris Pepper	10-Jun-23	evw 107	6:44 AM	YBFL	Yellow-bellied Flycatcher	<i>Empidonax flaviventris</i>	2	0				S	Lots of water noise, hard to hear birds
Chris Pepper	10-Jun-23	evw 107		MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	1	100				S	
Chris Pepper	10-Jun-23	evw 107		BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	2	100				S	
Chris Pepper	10-Jun-23	evw 107		WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1	50				S	
Chris Pepper	10-Jun-23	evw 107		WIWR	Winter Wren	<i>Troglodytes hiemalis</i>	1	100				S	
Chris Pepper	10-Jun-23	evw 107		NOWA	Northern Waterthrush	<i>Parkesia noveboracensis</i>	1	0				S	
Chris Pepper	10-Jun-23	evw 107		BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1	0				S	
Chris Pepper	10-Jun-23	evw 107		BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1	0				S	
Chris Pepper	10-Jun-23	evw 107		CAWA	Canada Warbler	<i>Cardellina canadensis</i>	1	N/A	Unknown			S	Waypoint 200
Chris Pepper	10-Jun-23	evw 107		BLBW	Blackburnian Warbler	<i>Setophaga fusca</i>	1	50				S	
Chris Pepper	10-Jun-23	evw 107		BEKI	Belted Kingfisher	<i>Megaceryle alcyon</i>	1	N/A	Unknown			X	
Chris Pepper	10-Jun-23	evw 110	6:58 AM	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1	0				S	
Chris Pepper	10-Jun-23	evw 110		YBFL	Yellow-bellied Flycatcher	<i>Empidonax flaviventris</i>	2	50				S	
Chris Pepper	10-Jun-23	evw 110		COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	2	0				S	
Chris Pepper	10-Jun-23	evw 110		MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	1	0				S	
Chris Pepper	10-Jun-23	evw 110		BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1	50				S	
Chris Pepper	10-Jun-23	evw 110		YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	2	0				S	
Chris Pepper	10-Jun-23	evw 110		BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1	50				S	
Chris Pepper	10-Jun-23	evw 110		HETH	Hermit Thrush	<i>Catharus guttatus</i>	2	100				S	
Chris Pepper	10-Jun-23	evw 110		RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1	50	E			S	
Chris Pepper	10-Jun-23	evw 110		WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1	100				S	
Chris Pepper	10-Jun-23	evw 110		LISP	Lincoln's Sparrow	<i>Melospiza lincolni</i>	1	100				S	
Chris Pepper	10-Jun-23	evw 110		SWTH	Swainson's Thrush	<i>Catharus ustulatus</i>	1	100				S	
Chris Pepper	10-Jun-23	evw 111	7:15 AM	CAWA	Canada Warbler	<i>Cardellina canadensis</i>	1	50	SW			S	
Chris Pepper	10-Jun-23	evw 111		YBFL	Yellow-bellied Flycatcher	<i>Empidonax flaviventris</i>	3	100				S	
Chris Pepper	10-Jun-23	evw 111		GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	50				S	
Chris Pepper	10-Jun-23	evw 111		NAWA	Nashville Warbler	<i>Leiothlypis ruficapilla</i>	1	100				S	
Chris Pepper	10-Jun-23	evw 111		WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	2	100				S	
Chris Pepper	10-Jun-23	evw 111		PAWA	Palm Warbler	<i>Setophaga palmarum</i>	2	100				S	
Chris Pepper	10-Jun-23	evw 111		BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1	50				S	
Chris Pepper	10-Jun-23	evw 111		MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	2	50				S	
Chris Pepper	10-Jun-23	evw 111		COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1	0				S	
Chris Pepper	10-Jun-23	evw 111		REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	1	100				S	
Chris Pepper	10-Jun-23	evw 111		AMRE	American Redstart	<i>Setophaga ruticilla</i>	1	100				S	
Chris Pepper	10-Jun-23	evw 111		BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1	100				S	
Chris Pepper	10-Jun-23	evw 111		BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1	10				S	
Chris Pepper	10-Jun-23	evw 111		NOFL	Northern Flicker	<i>Colaptes auratus</i>	1	100				H	

Table 8: 2023 Breeding Bird Point Count Survey Results - Harbour Hills Wind Project

Observer	Date	Survey Location	Survey Start Time	Species Code	Common Name	Scientific Name	#	Distance (m)	Bearing	Flyover Height (m)	Flight Direction	Breeding Evidence ¹	Comments
Chris Pepper	10-Jun-23	evw 111		BLJA	Blue Jay	<i>Cyanocitta cristata</i>	1	100				S	
Chris Pepper	10-Jun-23	evw 112	7:30 AM	YBFL	Yellow-bellied Flycatcher	<i>Empidonax flaviventris</i>	2	50				S	
Chris Pepper	10-Jun-23	evw 112		CAWA	Canada Warbler	<i>Cardellina canadensis</i>	1	50	W			S	
Chris Pepper	10-Jun-23	evw 112		HETH	Hermit Thrush	<i>Catharus guttatus</i>	1	50				S	
Chris Pepper	10-Jun-23	evw 112		NAWA	Nashville Warbler	<i>Leiothlypis ruficapilla</i>	1	50				S	
Chris Pepper	10-Jun-23	evw 112		MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	2	0				S	
Chris Pepper	10-Jun-23	evw 112		PAWA	Palm Warbler	<i>Setophaga palmarum</i>	2	0				S	
Chris Pepper	10-Jun-23	evw 112		COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	2	0				S	
Chris Pepper	10-Jun-23	evw 112		BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1	100				S	
Chris Pepper	10-Jun-23	evw 112		RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1	100	NE			S	
Chris Pepper	10-Jun-23	evw 112		RUBL	Rusty Blackbird	<i>Euphagus carolinus</i>	1	50	NW	south		H	Likely from same pair at waypoint 400 m west
Chris Pepper	10-Jun-23	evw 112		WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1	0				S	
Chris Pepper	10-Jun-23	evw 113	7:53 AM	NAWA	Nashville Warbler	<i>Leiothlypis ruficapilla</i>	2	0				H	
Chris Pepper	10-Jun-23	evw 113		HETH	Hermit Thrush	<i>Catharus guttatus</i>	1	100				S	
Chris Pepper	10-Jun-23	evw 113		YBFL	Yellow-bellied Flycatcher	<i>Empidonax flaviventris</i>	2	50				S	
Chris Pepper	10-Jun-23	evw 113		MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	3	50				S	
Chris Pepper	10-Jun-23	evw 113		PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1	100				S	
Chris Pepper	10-Jun-23	evw 113		BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1	0				S	
Chris Pepper	10-Jun-23	evw 113		COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	2	50				S	
Chris Pepper	10-Jun-23	evw 113		RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1	50	E			S	
Chris Pepper	10-Jun-23	evw 113		YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1	0				S	
Chris Pepper	10-Jun-23	evw 113		DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1	50				H	
Chris Pepper	10-Jun-23	evw 113		GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	0				S	
Chris Pepper	10-Jun-23	evw 121	8:21 AM	PUFI	Purple Finch	<i>Haemorhous purpureus</i>	1	50				S	
Chris Pepper	10-Jun-23	evw 121		LEFL	Least Flycatcher	<i>Empidonax minimus</i>	2	50				S	
Chris Pepper	10-Jun-23	evw 121		RUGR	Ruffed Grouse	<i>Bonasa umbellus</i>	1	50				D	
Chris Pepper	10-Jun-23	evw 121		OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	3	50				S	
Chris Pepper	10-Jun-23	evw 121		REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	2	0				S	
Chris Pepper	10-Jun-23	evw 121		HAWO	Hairy Woodpecker	<i>Dryobates villosus</i>	1	0				H	
Chris Pepper	10-Jun-23	evw 121		HETH	Hermit Thrush	<i>Catharus guttatus</i>	1	100				S	
Chris Pepper	10-Jun-23	evw 121		BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1	0				S	
Chris Pepper	10-Jun-23	evw 121		MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	1	0				S	
Chris Pepper	10-Jun-23	evw 121		YBSA	Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>	1	50				S	
Chris Pepper	10-Jun-23	evw 121		RTHU	Ruby-throated Hummingbird	<i>Archilochus colubris</i>	1	0				H	
Chris Pepper	10-Jun-23	evw 122	8:40 AM	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	2	50				S	
Chris Pepper	10-Jun-23	evw 122		YBFL	Yellow-bellied Flycatcher	<i>Empidonax flaviventris</i>	1	50				S	
Chris Pepper	10-Jun-23	evw 122		WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	2	100				S	
Chris Pepper	10-Jun-23	evw 122		OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	2	100				S	
Chris Pepper	10-Jun-23	evw 122		AMRE	American Redstart	<i>Setophaga ruticilla</i>	1	50				S	
Chris Pepper	10-Jun-23	evw 122		MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	2	100				S	
Chris Pepper	10-Jun-23	evw 122		BCCH	Black-capped Chickadee	<i>Poecile atricapillus</i>	1	100				S	
Chris Pepper	10-Jun-23	evw 122		REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	1	100				S	
Chris Pepper	10-Jun-23	evw 122		BLJA	Blue Jay	<i>Cyanocitta cristata</i>	1	100				H	
Chris Pepper	10-Jun-23	evw 122		BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	2	50				S	
Chris Pepper	10-Jun-23	evw 122		YBSA	Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>	1	100				H	
Chris Pepper	10-Jun-23	evw 122		COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1	100				S	
Chris Pepper	10-Jun-23	evw 122		HETH	Hermit Thrush	<i>Catharus guttatus</i>	1	100				S	
Chris Pepper	10-Jun-23	evw 122		SWTH	Swainson's Thrush	<i>Catharus ustulatus</i>	1	100				S	
Chris Pepper	10-Jun-23	evw 122		AMGO	American Goldfinch	<i>Spinus tristis</i>	1	50				H	
Chris Pepper	10-Jun-23	evw 120	8:54 AM	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	2	100				S	
Chris Pepper	10-Jun-23	evw 120		MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	2	50				S	
Chris Pepper	10-Jun-23	evw 120		YBFL	Yellow-bellied Flycatcher	<i>Empidonax flaviventris</i>	1	0				S	
Chris Pepper	10-Jun-23	evw 120		MOWA	Mourning Warbler	<i>Geothlypis philadelphia</i>	2	0				S	
Chris Pepper	10-Jun-23	evw 120		BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	2	50				S	
Chris Pepper	10-Jun-23	evw 120		COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1	10				S	
Chris Pepper	10-Jun-23	evw 120		HETH	Hermit Thrush	<i>Catharus guttatus</i>	1	100				S	
Chris Pepper	10-Jun-23	evw 120		SWTH	Swainson's Thrush	<i>Catharus ustulatus</i>	1	100				S	
Chris Pepper	10-Jun-23	evw 120		AMRE	American Redstart	<i>Setophaga ruticilla</i>	1	100				S	
Chris Pepper	10-Jun-23	evw 120		RUGR	Ruffed Grouse	<i>Bonasa umbellus</i>	1	0				D	
Chris Pepper	10-Jun-23	evw 120		REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	1	100				S	
Chris Pepper	10-Jun-23	evw 120		RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1	100				S	
Chris Pepper	10-Jun-23	evw 120		YBSA	Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>	1	100				H	
Chris Pepper	10-Jun-23	evw 120		OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	2	100				S	
Chris Pepper	10-Jun-23	evw 120		GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	0				S	
Chris Pepper	10-Jun-23	evw 119	9:07 AM	AMRO	American Robin	<i>Turdus migratorius</i>	1	50				S	
Chris Pepper	10-Jun-23	evw 119		RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1	100	SW			S	
Chris Pepper	10-Jun-23	evw 119		YBFL	Yellow-bellied Flycatcher	<i>Empidonax flaviventris</i>	3	50				S	
Chris Pepper	10-Jun-23	evw 119		YBSA	Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>	1	50				H	
Chris Pepper	10-Jun-23	evw 119		HETH	Hermit Thrush	<i>Catharus guttatus</i>	1	100				S	
Chris Pepper	10-Jun-23	evw 119		BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1	50				S	
Chris Pepper	10-Jun-23	evw 119		RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1	0	N			S	
Chris Pepper	10-Jun-23	evw 119		COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1	100				S	

Table 8: 2023 Breeding Bird Point Count Survey Results - Harbour Hills Wind Project

Observer	Date	Survey Location	Survey Start Time	Species Code	Common Name	Scientific Name	#	Distance (m)	Bearing	Flyover Height (m)	Flight Direction	Breeding Evidence ¹	Comments
Chris Pepper	10-Jun-23	evw 119		CAWA	Canada Warbler	<i>Cardellina canadensis</i>	1	100	N			S	
Chris Pepper	10-Jun-23	evw 119		WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1	100				S	
Chris Pepper	10-Jun-23	evw 119		MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	2	100				S	
Chris Pepper	10-Jun-23	evw 119		WIWR	Winter Wren	<i>Troglodytes hiemalis</i>	1	100				S	
Chris Pepper	10-Jun-23	evw 119		ALFL	Alder Flycatcher	<i>Empidonax alnorum</i>	1	100				S	
Chris Pepper	10-Jun-23	evw 119		BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1	50				S	
Chris Pepper	10-Jun-23	evw 119		PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1	100				S	
Chris Pepper	10-Jun-23	evw 119		BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	2	100				S	
Chris Pepper	10-Jun-23	evw 119		SWTH	Swainson's Thrush	<i>Catharus ustulatus</i>	1	50				H	
Chris Pepper	10-Jun-23	evw 126	9:28 AM	ALFL	Alder Flycatcher	<i>Empidonax alnorum</i>	2	50				H	
Chris Pepper	10-Jun-23	evw 126		MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	2	50				S	
Chris Pepper	10-Jun-23	evw 126		AMRE	American Redstart	<i>Setophaga ruticilla</i>	2	50				S	
Chris Pepper	10-Jun-23	evw 126		WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	3	0				S	
Chris Pepper	10-Jun-23	evw 126		PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1	0				S	
Chris Pepper	10-Jun-23	evw 126		RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1	0	N			S	
Chris Pepper	10-Jun-23	evw 126		BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1	100				S	
Chris Pepper	10-Jun-23	evw 126		YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1	50				S	
Chris Pepper	10-Jun-23	evw 126		BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1	100				S	
Chris Pepper	10-Jun-23	evw 126		YBFL	Yellow-bellied Flycatcher	<i>Empidonax flaviventris</i>	1	100				S	
Chris Pepper	10-Jun-23	evw 126		COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	2	0				S	
Chris Pepper	10-Jun-23	evw 126		HETH	Hermit Thrush	<i>Catharus guttatus</i>	1	100				S	
Chris Pepper	10-Jun-23	evw 126		BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1	0				S	
Chris Pepper	10-Jun-23	evw 127	9:48 AM	HETH	Hermit Thrush	<i>Catharus guttatus</i>	1	100				S	
Chris Pepper	10-Jun-23	evw 127		YBSA	Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>	1	100				H	
Chris Pepper	10-Jun-23	evw 127		REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	2	100				S	
Chris Pepper	10-Jun-23	evw 127		LEFL	Least Flycatcher	<i>Empidonax minimus</i>	1	0				S	
Chris Pepper	10-Jun-23	evw 127		HAWO	Hairy Woodpecker	<i>Dryobates villosus</i>	1	100				H	
Chris Pepper	10-Jun-23	evw 127		OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	3	0				S	
Chris Pepper	10-Jun-23	evw 127		MOWA	Mourning Warbler	<i>Geothlypis philadelphia</i>	1	50				S	
Chris Pepper	10-Jun-23	evw 127		DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1	0				S	
Chris Pepper	10-Jun-23	evw 127		SWTH	Swainson's Thrush	<i>Catharus ustulatus</i>	1	100				H	
Chris Pepper	10-Jun-23	evw 127		WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1	100				S	
Chris Pepper	10-Jun-23	evw 127		RUGR	Ruffed Grouse	<i>Bonasa umbellus</i>	1	50				D	
Chris Pepper	14-Jun-23	evw 187	4:52 AM	LEFL	Least Flycatcher	<i>Empidonax minimus</i>	3	0				S	
Chris Pepper	14-Jun-23	evw 187		AMRE	American Redstart	<i>Setophaga ruticilla</i>	2	50				S	
Chris Pepper	14-Jun-23	evw 187		MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	3	0				S	
Chris Pepper	14-Jun-23	evw 187		COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	2	0				S	
Chris Pepper	14-Jun-23	evw 187		WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1	50				S	
Chris Pepper	14-Jun-23	evw 187		WIWR	Winter Wren	<i>Troglodytes hiemalis</i>	1	50				S	
Chris Pepper	14-Jun-23	evw 187		SWTH	Swainson's Thrush	<i>Catharus ustulatus</i>	1	100				S	
Chris Pepper	14-Jun-23	evw 187		MOWA	Mourning Warbler	<i>Geothlypis philadelphia</i>	2	50				S	
Chris Pepper	14-Jun-23	evw 187		DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1	50				S	
Chris Pepper	14-Jun-23	evw 187		YBSA	Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>	2	100				H	
Chris Pepper	14-Jun-23	evw 187		AMRO	American Robin	<i>Turdus migratorius</i>	2	50				S	
Chris Pepper	14-Jun-23	evw 187		BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1	50				S	
Chris Pepper	14-Jun-23	evw 187		OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	1	50				S	
Chris Pepper	16-Jun-23	evw 143	5:16 AM	MOWA	Mourning Warbler	<i>Geothlypis philadelphia</i>	1	0				S	
Chris Pepper	16-Jun-23	evw 143		OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	2	0				S	
Chris Pepper	16-Jun-23	evw 143		BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	2	0				S	
Chris Pepper	16-Jun-23	evw 143		HETH	Hermit Thrush	<i>Catharus guttatus</i>	1	100				S	
Chris Pepper	16-Jun-23	evw 143		WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1	100				S	
Chris Pepper	16-Jun-23	evw 143		AMRE	American Redstart	<i>Setophaga ruticilla</i>	1	100				S	
Chris Pepper	16-Jun-23	evw 143		WIWR	Winter Wren	<i>Troglodytes hiemalis</i>	1	100				S	
Chris Pepper	16-Jun-23	evw 143		REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	1	100				S	
Chris Pepper	16-Jun-23	evw 143		SWTH	Swainson's Thrush	<i>Catharus ustulatus</i>	1	100				S	
Chris Pepper	16-Jun-23	evw 144	5:32 AM	NAWA	Nashville Warbler	<i>Leiothlypis rufigapilla</i>	1	0				S	
Chris Pepper	16-Jun-23	evw 144		MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	1	0				S	
Chris Pepper	16-Jun-23	evw 144		YBFL	Yellow-bellied Flycatcher	<i>Empidonax flaviventris</i>	2	50				S	
Chris Pepper	16-Jun-23	evw 144		NOFL	Northern Flicker	<i>Colaptes auratus</i>	1	100				H	
Chris Pepper	16-Jun-23	evw 144		AMRE	American Redstart	<i>Setophaga ruticilla</i>	1	0				S	
Chris Pepper	16-Jun-23	evw 144		RTHU	Ruby-throated Hummingbird	<i>Archilochus colubris</i>	1	0				H	
Chris Pepper	16-Jun-23	evw 144		BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	2	0				S	
Chris Pepper	16-Jun-23	evw 144		HETH	Hermit Thrush	<i>Catharus guttatus</i>	1	100				S	
Chris Pepper	16-Jun-23	evw 144		WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1	50				H	
Chris Pepper	16-Jun-23	evw 144		RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1	50	W			S	
Chris Pepper	16-Jun-23	evw 144		YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1	0				S	
Chris Pepper	16-Jun-23	evw 144		BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	2	0				S	
Chris Pepper	16-Jun-23	evw 144		AMRO	American Robin	<i>Turdus migratorius</i>	2	0				S	
Chris Pepper	16-Jun-23	evw 144		PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1	0				S	
Chris Pepper	16-Jun-23	evw 148	6:06 AM	PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1	0				S	
Chris Pepper	16-Jun-23	evw 148		MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	2	0				S	
Chris Pepper	16-Jun-23	evw 148		HETH	Hermit Thrush	<i>Catharus guttatus</i>	2	100				S	
Chris Pepper	16-Jun-23	evw 148		GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	0				S	

Table 8: 2023 Breeding Bird Point Count Survey Results - Harbour Hills Wind Project

Observer	Date	Survey Location	Survey Start Time	Species Code	Common Name	Scientific Name	#	Distance (m)	Bearing	Flyover Height (m)	Flight Direction	Breeding Evidence ¹	Comments
Chris Pepper	16-Jun-23	evw 148		YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1	50				S	
Chris Pepper	16-Jun-23	evw 148		AMRO	American Robin	<i>Turdus migratorius</i>	1	50				S	
Chris Pepper	16-Jun-23	evw 148		BLJA	Blue Jay	<i>Cyanocitta cristata</i>	1	0				H	
Chris Pepper	16-Jun-23	evw 148		BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	2	50				S	
Chris Pepper	16-Jun-23	evw 148		CAWA	Canada Warbler	<i>Cardellina canadensis</i>	1	100	N			S	
Chris Pepper	16-Jun-23	evw 148		NOWA	Northern Waterthrush	<i>Parkesia noveboracensis</i>	1	100				S	
Chris Pepper	16-Jun-23	evw 148		DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1	0				H	
Chris Pepper	16-Jun-23	evw 148		YBFL	Yellow-bellied Flycatcher	<i>Empidonax flaviventris</i>	1	100				S	
Chris Pepper	16-Jun-23	evw 148		BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1	0				S	
Chris Pepper	16-Jun-23	evw 148		BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1	100				S	
Chris Pepper	16-Jun-23	evw 148		COLO	Common Loon	<i>Gavia immer</i>	1	1000				X	
Chris Pepper	16-Jun-23	evw 148		WIWR	Winter Wren	<i>Troglodytes hiemalis</i>	1	100				S	
Chris Pepper	16-Jun-23	evw 149	6:23 AM	BBWA	Bay-breasted Warbler	<i>Setophaga castanea</i>	1	0	W			S	
Chris Pepper	16-Jun-23	evw 149		HETH	Hermit Thrush	<i>Catharus guttatus</i>	1	100				S	
Chris Pepper	16-Jun-23	evw 149		BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1	100				S	
Chris Pepper	16-Jun-23	evw 149		YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1	100				S	
Chris Pepper	16-Jun-23	evw 149		OSFL	Olive-sided Flycatcher	<i>Contopus cooperi</i>	1	100	E			S	
Chris Pepper	16-Jun-23	evw 149		TRES	Tree Swallow	<i>Tachycineta bicolor</i>	2	50				X	
Chris Pepper	16-Jun-23	evw 149		WIWR	Winter Wren	<i>Troglodytes hiemalis</i>	1	100				S	
Chris Pepper	16-Jun-23	evw 149		BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1	100				S	
Chris Pepper	16-Jun-23	evw 149		DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1	0				S	
Chris Pepper	16-Jun-23	evw 149		RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1	100	SW			S	
Chris Pepper	16-Jun-23	evw 149		SWTH	Swainson's Thrush	<i>Catharus ustulatus</i>	1	100				S	
Chris Pepper	16-Jun-23	evw 152	6:55 AM	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	4	0				S	
Chris Pepper	16-Jun-23	evw 152		RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1	100	NW			S	
Chris Pepper	16-Jun-23	evw 152		COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	2	0				S	
Chris Pepper	16-Jun-23	evw 152		BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1	0				S	
Chris Pepper	16-Jun-23	evw 152		PAWA	Palm Warbler	<i>Setophaga palmarum</i>	2	0				S	
Chris Pepper	16-Jun-23	evw 152		ALFL	Alder Flycatcher	<i>Empidonax alnorum</i>	2	0				S	
Chris Pepper	16-Jun-23	evw 152		YBFL	Yellow-bellied Flycatcher	<i>Empidonax flaviventris</i>	2	50				S	
Chris Pepper	16-Jun-23	evw 152		YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	2	50				S	
Chris Pepper	16-Jun-23	evw 152		WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	2	50				S	
Chris Pepper	16-Jun-23	evw 152		LISP	Lincoln's Sparrow	<i>Melospiza lincolni</i>	1	50				S	
Chris Pepper	16-Jun-23	evw 152		COGR	Common Grackle	<i>Quiscalus quiscula</i>	1	100				H	
Chris Pepper	16-Jun-23	evw 152		NAWA	Nashville Warbler	<i>Leiothlypis ruficapilla</i>	1	100				S	
Chris Pepper	16-Jun-23	evw 142	7:13 AM	HETH	Hermit Thrush	<i>Catharus guttatus</i>	2	100				S	
Chris Pepper	16-Jun-23	evw 142		ALFL	Alder Flycatcher	<i>Empidonax alnorum</i>	2	100				S	
Chris Pepper	16-Jun-23	evw 142		BCCH	Black-capped Chickadee	<i>Poecile atricapillus</i>	1	50				S	
Chris Pepper	16-Jun-23	evw 142		WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	2	50				S	
Chris Pepper	16-Jun-23	evw 142		YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1	50				S	
Chris Pepper	16-Jun-23	evw 142		AMRE	American Redstart	<i>Setophaga ruticilla</i>	2	0				S	
Chris Pepper	16-Jun-23	evw 142		BBWO	Black-backed Woodpecker	<i>Picoides arcticus</i>	1	0				H	
Chris Pepper	16-Jun-23	evw 142		GRYE	Greater Yellowlegs	<i>Tringa melanoleuca</i>	1	500	Unknown				
Chris Pepper	16-Jun-23	evw 142		PAWA	Palm Warbler	<i>Setophaga palmarum</i>	2	50				S	
Chris Pepper	16-Jun-23	evw 142		BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	2	50				S	
Chris Pepper	16-Jun-23	evw 142		YBFL	Yellow-bellied Flycatcher	<i>Empidonax flaviventris</i>	1	50				S	
Chris Pepper	16-Jun-23	evw 142		MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	3	0				S	
Chris Pepper	16-Jun-23	evw 142		COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1	100				S	
Chris Pepper	16-Jun-23	evw 141	7:36 AM	GRYE	Greater Yellowlegs	<i>Tringa melanoleuca</i>	1	500	N			S	
Chris Pepper	16-Jun-23	evw 141		NAWA	Nashville Warbler	<i>Leiothlypis ruficapilla</i>	1	0				S	
Chris Pepper	16-Jun-23	evw 141		YBFL	Yellow-bellied Flycatcher	<i>Empidonax flaviventris</i>	2	100				S	
Chris Pepper	16-Jun-23	evw 141		ALFL	Alder Flycatcher	<i>Empidonax alnorum</i>	2	0				S	
Chris Pepper	16-Jun-23	evw 141		COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	3	0				S	
Chris Pepper	16-Jun-23	evw 141		MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	2	0				S	
Chris Pepper	16-Jun-23	evw 141		WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	3	0				S	
Chris Pepper	16-Jun-23	evw 141		PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1	0				S	
Chris Pepper	16-Jun-23	evw 141		BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	2	0				S	
Chris Pepper	16-Jun-23	evw 141		HETH	Hermit Thrush	<i>Catharus guttatus</i>	1	0				S	
Chris Pepper	16-Jun-23	evw 141		GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	0				H	
Chris Pepper	16-Jun-23	evw 141		OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	1	100				S	
Chris Pepper	16-Jun-23	evw 140	7:50 AM	NAWA	Nashville Warbler	<i>Leiothlypis ruficapilla</i>	1	0				S	
Chris Pepper	16-Jun-23	evw 140		CAJA	Canada Jay	<i>Perisoreus canadensis</i>	2	100	NW			H	
Chris Pepper	16-Jun-23	evw 140		YBFL	Yellow-bellied Flycatcher	<i>Empidonax flaviventris</i>	2	50				S	
Chris Pepper	16-Jun-23	evw 140		COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1	0				S	
Chris Pepper	16-Jun-23	evw 140		WIWR	Winter Wren	<i>Troglodytes hiemalis</i>	1	100				S	
Chris Pepper	16-Jun-23	evw 140		AMRE	American Redstart	<i>Setophaga ruticilla</i>	1	50				S	
Chris Pepper	16-Jun-23	evw 140		HETH	Hermit Thrush	<i>Catharus guttatus</i>	2	50				S	
Chris Pepper	16-Jun-23	evw 140		WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1	100				S	
Chris Pepper	16-Jun-23	evw 140		PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1	50				H	
Chris Pepper	16-Jun-23	evw 140		MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	3	0				S	
Chris Pepper	16-Jun-23	evw 140		NOFL	Northern Flicker	<i>Colaptes auratus</i>	1	100				H	
Chris Pepper	16-Jun-23	evw 140		DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1	50				S	
Chris Pepper	16-Jun-23	evw 140		GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	0				S	

Table 8: 2023 Breeding Bird Point Count Survey Results - Harbour Hills Wind Project

Observer	Date	Survey Location	Survey Start Time	Species Code	Common Name	Scientific Name	#	Distance (m)	Bearing	Flyover Height (m)	Flight Direction	Breeding Evidence ¹	Comments
Chris Pepper	16-Jun-23	evw 140		YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1	50				S	
Chris Pepper	16-Jun-23	evw 140		ALFL	Alder Flycatcher	<i>Empidonax alnorum</i>	1	100				S	
Chris Pepper	16-Jun-23	evw 140		GRYE	Greater Yellowlegs	<i>Tringa melanoleuca</i>	1	100	NE			S	
Chris Pepper	16-Jun-23	evw 139	8:06 AM	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1	0				S	
Chris Pepper	16-Jun-23	evw 139		MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	2	0				S	
Chris Pepper	16-Jun-23	evw 139		BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1	100				S	
Chris Pepper	16-Jun-23	evw 139		OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	1	100				S	
Chris Pepper	16-Jun-23	evw 139		BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	2	100				S	
Chris Pepper	16-Jun-23	evw 139		WIWR	Winter Wren	<i>Troglodytes hiemalis</i>	1	100				S	
Chris Pepper	16-Jun-23	evw 139		AMRE	American Redstart	<i>Setophaga ruticilla</i>	2	0				S	
Chris Pepper	16-Jun-23	evw 139		ALFL	Alder Flycatcher	<i>Empidonax alnorum</i>	1	50				S	
Chris Pepper	16-Jun-23	evw 139		LEFL	Least Flycatcher	<i>Empidonax minimus</i>	2	0				S	
Chris Pepper	16-Jun-23	evw 139		WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1	0				H	
Chris Pepper	16-Jun-23	evw 139		REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	1	100				S	
Chris Pepper	16-Jun-23	evw 139		COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	2	0				S	
Chris Pepper	16-Jun-23	evw 139		YBFL	Yellow-bellied Flycatcher	<i>Empidonax flaviventris</i>	1	100				S	
Chris Pepper	16-Jun-23	evw 139		DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1	50				S	
Chris Pepper	16-Jun-23	evw 139		SWTH	Swainson's Thrush	<i>Catharus ustulatus</i>	1	0				H	
Chris Pepper	16-Jun-23	evw 139		PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1	0				S	
Chris Pepper	16-Jun-23	evw 139		NAWA	Nashville Warbler	<i>Leiothlypis ruficapilla</i>	1	0				S	
Chris Pepper	16-Jun-23	evw 134	8:22 AM	SWTH	Swainson's Thrush	<i>Catharus ustulatus</i>	1	100				S	
Chris Pepper	16-Jun-23	evw 134		YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1	0				S	
Chris Pepper	16-Jun-23	evw 134		COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1	50				S	
Chris Pepper	16-Jun-23	evw 134		BCCH	Black-capped Chickadee	<i>Poecile atricapillus</i>	2	0				S	
Chris Pepper	16-Jun-23	evw 134		YBFL	Yellow-bellied Flycatcher	<i>Empidonax flaviventris</i>	1	50				S	
Chris Pepper	16-Jun-23	evw 134		BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1	50				S	
Chris Pepper	16-Jun-23	evw 134		MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	2	0				S	
Chris Pepper	16-Jun-23	evw 134		WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1	100				S	
Chris Pepper	16-Jun-23	evw 134		HETH	Hermit Thrush	<i>Catharus guttatus</i>	1	100				S	
Chris Pepper	16-Jun-23	evw 134		PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1	50				S	
Chris Pepper	16-Jun-23	evw 134		BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1	0				S	
Chris Pepper	16-Jun-23	evw 134		DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1	50				S	
Chris Pepper	16-Jun-23	evw 134		PUFI	Purple Finch	<i>Haemorhous purpureus</i>	1	50				S	
Chris Pepper	16-Jun-23	evw 134		ALFL	Alder Flycatcher	<i>Empidonax alnorum</i>	2	50				S	
Chris Pepper	16-Jun-23	evw 134		OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	1	100				S	
Chris Pepper	16-Jun-23	evw 150	8:43 AM	CAWA	Canada Warbler	<i>Cardellina canadensis</i>	1	0	E			S	
Chris Pepper	16-Jun-23	evw 150		BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1	0				S	
Chris Pepper	16-Jun-23	evw 150		YBFL	Yellow-bellied Flycatcher	<i>Empidonax flaviventris</i>	2	50				S	
Chris Pepper	16-Jun-23	evw 150		ALFL	Alder Flycatcher	<i>Empidonax alnorum</i>	1	100				S	
Chris Pepper	16-Jun-23	evw 150		SWTH	Swainson's Thrush	<i>Catharus ustulatus</i>	2	50				S	
Chris Pepper	16-Jun-23	evw 150		HETH	Hermit Thrush	<i>Catharus guttatus</i>	2	100				S	
Chris Pepper	16-Jun-23	evw 150		MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	3	0				S	
Chris Pepper	16-Jun-23	evw 150		COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	2	0				S	
Chris Pepper	16-Jun-23	evw 150		WIWR	Winter Wren	<i>Troglodytes hiemalis</i>	1	100				S	
Chris Pepper	16-Jun-23	evw 150		PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1	50				S	
Chris Pepper	16-Jun-23	evw 150		GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	0				S	
Chris Pepper	16-Jun-23	evw 150		BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1	50				S	
Chris Pepper	16-Jun-23	evw 150		RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1	50	S			S	
Chris Pepper	16-Jun-23	evw 150		AMRE	American Redstart	<i>Setophaga ruticilla</i>	1	0				S	
Chris Pepper	16-Jun-23	evw 150		BLJA	Blue Jay	<i>Cyanocitta cristata</i>	1	50				S	
Chris Pepper	16-Jun-23	evw 150		SWSP	Swamp Sparrow	<i>Melospiza georgiana</i>	1	100				S	
Chris Pepper	16-Jun-23	evw 151	9:01 AM	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	3	0				S	
Chris Pepper	16-Jun-23	evw 151		SWTH	Swainson's Thrush	<i>Catharus ustulatus</i>	1	100				S	
Chris Pepper	16-Jun-23	evw 151		OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	2	0				S	
Chris Pepper	16-Jun-23	evw 151		HETH	Hermit Thrush	<i>Catharus guttatus</i>	1	0				S	
Chris Pepper	16-Jun-23	evw 151		REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	1	0				S	
Chris Pepper	16-Jun-23	evw 151		N/A	Woodpecker Sp.	N/A	1	250				H	
Chris Pepper	16-Jun-23	evw 145	9:18 AM	MOWA	Mourning Warbler	<i>Geothlypis philadelphia</i>	2	50				S	
Chris Pepper	16-Jun-23	evw 145		DOWO	Downy Woodpecker	<i>Dryobates pubescens</i>	1	100				H	
Chris Pepper	16-Jun-23	evw 145		BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	2	100				S	
Chris Pepper	16-Jun-23	evw 145		REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	2	100				S	
Chris Pepper	16-Jun-23	evw 145		OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	2	50				S	
Chris Pepper	16-Jun-23	evw 145		RTHU	Ruby-throated Hummingbird	<i>Archilochus colubris</i>	1	0				H	
Chris Pepper	16-Jun-23	evw 145		LEFL	Least Flycatcher	<i>Empidonax minimus</i>	1	50				S	
Chris Pepper	16-Jun-23	evw 145		PUFI	Purple Finch	<i>Haemorhous purpureus</i>	1	50				H	
Chris Pepper	16-Jun-23	evw 145		HETH	Hermit Thrush	<i>Catharus guttatus</i>	1	100				S	
Chris Pepper	16-Jun-23	evw 145		BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1	100				S	
Chris Pepper	16-Jun-23	evw 145		WIWR	Winter Wren	<i>Troglodytes hiemalis</i>	1	100				S	
Chris Pepper	16-Jun-23	evw 146	9:36 AM	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	2	100				S	
Chris Pepper	16-Jun-23	evw 146		BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	2	50				S	
Chris Pepper	16-Jun-23	evw 146		NOFL	Northern Flicker	<i>Colaptes auratus</i>	1	250				H	
Chris Pepper	16-Jun-23	evw 146		MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	2	50				S	
Chris Pepper	16-Jun-23	evw 146		YBFL	Yellow-bellied Flycatcher	<i>Empidonax flaviventris</i>	1	50				S	

Table 8: 2023 Breeding Bird Point Count Survey Results - Harbour Hills Wind Project

Observer	Date	Survey Location	Survey Start Time	Species Code	Common Name	Scientific Name	#	Distance (m)	Bearing	Flyover Height (m)	Flight Direction	Breeding Evidence ¹	Comments
Chris Pepper	16-Jun-23	evw 146		BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1	50				S	
Chris Pepper	16-Jun-23	evw 147	9:49 AM	OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	2	100				S	
Chris Pepper	16-Jun-23	evw 147		BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	2	50				S	
Chris Pepper	16-Jun-23	evw 147		REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	2	0				S	
Chris Pepper	16-Jun-23	evw 147		HETH	Hermit Thrush	<i>Catharus guttatus</i>	1	100				S	
Chris Pepper	16-Jun-23	evw 147		BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1	0				S	
Chris Pepper	16-Jun-23	evw 147		RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1	50	NE			S	
Chris Pepper	16-Jun-23	evw 147		PUFI	Purple Finch	<i>Haemorhous purpureus</i>	1	50				S	
Chris Pepper	19-Jun-23	evw 177	5:29 AM	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	1	50				S	
Chris Pepper	19-Jun-23	evw 177		AMRO	American Robin	<i>Turdus migratorius</i>	1	100				S	
Chris Pepper	19-Jun-23	evw 177		AMRE	American Redstart	<i>Setophaga ruticilla</i>	1	50				S	
Chris Pepper	19-Jun-23	evw 177		BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1	50				S	
Chris Pepper	19-Jun-23	evw 177		HETH	Hermit Thrush	<i>Catharus guttatus</i>	1	50				S	
Chris Pepper	19-Jun-23	evw 177		BCCH	Black-capped Chickadee	<i>Poecile atricapillus</i>	1	100				S	
Chris Pepper	19-Jun-23	evw 177		SWTH	Swainson's Thrush	<i>Catharus ustulatus</i>	1	100				S	
Chris Pepper	19-Jun-23	evw 177		BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1	50				S	
Chris Pepper	19-Jun-23	evw 177		BBWA	Bay-breasted Warbler	<i>Setophaga castanea</i>	1	0	SE			S	
Chris Pepper	19-Jun-23	evw 177		RBNU	Red-breasted Nuthatch	<i>Sitta canadensis</i>	1	0				H	
Chris Pepper	19-Jun-23	evw 177		AMCR	American Crow	<i>Corvus brachyrhynchos</i>	1	250				X	
Chris Pepper	19-Jun-23	evw 177		OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	1	100				S	
Chris Pepper	19-Jun-23	evw 176(moved)	5:51 AM	GRYE	Greater Yellowlegs	<i>Tringa melanoleuca</i>	1	0				H	
Chris Pepper	19-Jun-23	evw 176(moved)		COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	2	100				S	
Chris Pepper	19-Jun-23	evw 176(moved)		LEFL	Least Flycatcher	<i>Empidonax minimus</i>	1	100				S	
Chris Pepper	19-Jun-23	evw 176(moved)		WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1	100				S	
Chris Pepper	19-Jun-23	evw 176(moved)		YBFL	Yellow-bellied Flycatcher	<i>Empidonax flaviventris</i>	1	100				S	
Chris Pepper	19-Jun-23	evw 176(moved)		NAWA	Nashville Warbler	<i>Leiothlypis ruficapilla</i>	1	100				S	
Chris Pepper	19-Jun-23	evw 176(moved)		YEWA	Yellow Warbler	<i>Setophaga petechia</i>	1	100				S	
Chris Pepper	19-Jun-23	evw 176(moved)		SAVS	Savannah Sparrow	<i>Passerculus sandwichensis</i>	2	50				S	
Chris Pepper	19-Jun-23	evw 176(moved)		LISP	Lincoln's Sparrow	<i>Melospiza lincolni</i>	1	50				S	
Chris Pepper	19-Jun-23	evw 176(moved)		AMRE	American Redstart	<i>Setophaga ruticilla</i>	1	100				S	
Chris Pepper	19-Jun-23	evw 176(moved)		ALFL	Alder Flycatcher	<i>Empidonax alnorum</i>	2	100				S	
Chris Pepper	19-Jun-23	evw 176(moved)		PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1	100				S	
Chris Pepper	19-Jun-23	evw 213	6:11 AM	LISP	Lincoln's Sparrow	<i>Melospiza lincolni</i>	2	100				S	
Chris Pepper	19-Jun-23	evw 213		ALFL	Alder Flycatcher	<i>Empidonax alnorum</i>	2	50				S	
Chris Pepper	19-Jun-23	evw 213		AMCR	American Crow	<i>Corvus brachyrhynchos</i>	1	100				X	
Chris Pepper	19-Jun-23	evw 213		PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1	100				S	
Chris Pepper	19-Jun-23	evw 213		AMRE	American Redstart	<i>Setophaga ruticilla</i>	1	100				S	
Chris Pepper	19-Jun-23	evw 213		MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	2	100				S	
Chris Pepper	19-Jun-23	evw 213		COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	3	100				S	
Chris Pepper	19-Jun-23	evw 213		HETH	Hermit Thrush	<i>Catharus guttatus</i>	2	100				S	
Chris Pepper	19-Jun-23	evw 213		WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	2	100				S	
Chris Pepper	19-Jun-23	evw 213		NAWA	Nashville Warbler	<i>Leiothlypis ruficapilla</i>	1	100				S	
Chris Pepper	19-Jun-23	evw 213		YEWA	Yellow Warbler	<i>Setophaga petechia</i>	1	100				S	
Chris Pepper	19-Jun-23	evw 213		PUFI	Purple Finch	<i>Haemorhous purpureus</i>	1	0	N	50	S	Flying	
Chris Pepper	19-Jun-23	evw 175	6:28 AM	BOCH	Boreal Chickadee	<i>Poecile hudsonicus</i>	1	0	E			H	
Chris Pepper	19-Jun-23	evw 175		NAWA	Nashville Warbler	<i>Leiothlypis ruficapilla</i>	2	0				S	
Chris Pepper	19-Jun-23	evw 175		YBFL	Yellow-bellied Flycatcher	<i>Empidonax flaviventris</i>	1	50				S	
Chris Pepper	19-Jun-23	evw 175		SWTH	Swainson's Thrush	<i>Catharus ustulatus</i>	1	50				S	
Chris Pepper	19-Jun-23	evw 175		AMRE	American Redstart	<i>Setophaga ruticilla</i>	1	50				S	
Chris Pepper	19-Jun-23	evw 175		COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	2	50				S	
Chris Pepper	19-Jun-23	evw 175		PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1	50				S	
Chris Pepper	19-Jun-23	evw 175		HETH	Hermit Thrush	<i>Catharus guttatus</i>	1	100				S	
Chris Pepper	19-Jun-23	evw 175		AMRO	American Robin	<i>Turdus migratorius</i>	1	100				S	
Chris Pepper	19-Jun-23	evw 175		YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	2	0				S	
Chris Pepper	19-Jun-23	evw 175		ALFL	Alder Flycatcher	<i>Empidonax alnorum</i>	1	0				H	
Chris Pepper	19-Jun-23	evw 175		CORA	Common Raven	<i>Corvus corax</i>	2	500				FY	
Chris Pepper	19-Jun-23	evw 175		PUFI	Purple Finch	<i>Haemorhous purpureus</i>	1	50				H	
Chris Pepper	19-Jun-23	evw 175		MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	1	50				S	
Chris Pepper	19-Jun-23	evw 175		WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1	100				S	
Chris Pepper	19-Jun-23	evw 173	6:48 AM	HETH	Hermit Thrush	<i>Catharus guttatus</i>	1	100				S	
Chris Pepper	19-Jun-23	evw 173		BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	2	50				S	
Chris Pepper	19-Jun-23	evw 173		MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	2	50				S	
Chris Pepper	19-Jun-23	evw 173		BCCH	Black-capped Chickadee	<i>Poecile atricapillus</i>	2	50				H	
Chris Pepper	19-Jun-23	evw 173		ALFL	Alder Flycatcher	<i>Empidonax alnorum</i>	1	0				H	
Chris Pepper	19-Jun-23	evw 173		GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	0				S	
Chris Pepper	19-Jun-23	evw 173		YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1	50				S	
Chris Pepper	19-Jun-23	evw 173		PUFI	Purple Finch	<i>Haemorhous purpureus</i>	1	0				H	
Chris Pepper	19-Jun-23	evw 173		BOCH	Boreal Chickadee	<i>Poecile hudsonicus</i>	1	0	E			H	
Chris Pepper	19-Jun-23	evw 173		DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1	50				S	
Chris Pepper	19-Jun-23	evw 173		AMRE	American Redstart	<i>Setophaga ruticilla</i>	2	0				S	
Chris Pepper	19-Jun-23	evw 173		WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	2	50				S	
Chris Pepper	19-Jun-23	evw 173		AMRO	American Robin	<i>Turdus migratorius</i>	1	0				H	
Chris Pepper	19-Jun-23	evw 173		BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1	100				S	

Table 8: 2023 Breeding Bird Point Count Survey Results - Harbour Hills Wind Project

Observer	Date	Survey Location	Survey Start Time	Species Code	Common Name	Scientific Name	#	Distance (m)	Bearing	Flyover Height (m)	Flight Direction	Breeding Evidence ¹	Comments
Chris Pepper	19-Jun-23	evw 173		NAWA	Nashville Warbler	<i>Leiothlypis ruficapilla</i>	1	50				S	
Chris Pepper	19-Jun-23	evw 173		BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1	100				S	
Chris Pepper	19-Jun-23	evw 173		LISP	Lincoln's Sparrow	<i>Melospiza lincolnii</i>	1	50				S	
Chris Pepper	19-Jun-23	evw 173		COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1	100				S	
Chris Pepper	19-Jun-23	evw 173		RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1	N/A	Unknown			S	Heard by main road
Chris Pepper	19-Jun-23	evw174	7:08 AM	NAWA	Nashville Warbler	<i>Leiothlypis ruficapilla</i>	2	0				S	
Chris Pepper	19-Jun-23	evw174		YBFL	Yellow-bellied Flycatcher	<i>Empidonax flaviventris</i>	2	0				S	
Chris Pepper	19-Jun-23	evw174		HETH	Hermit Thrush	<i>Catharus guttatus</i>	1	100				S	
Chris Pepper	19-Jun-23	evw174		MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	1	50				S	
Chris Pepper	19-Jun-23	evw174		ALFL	Alder Flycatcher	<i>Empidonax alnorum</i>	1	100				S	
Chris Pepper	19-Jun-23	evw174		PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1	0				S	
Chris Pepper	19-Jun-23	evw174		WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	3	100				S	
Chris Pepper	19-Jun-23	evw174		COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	2	100				S	
Chris Pepper	19-Jun-23	evw174		BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1	100				S	
Chris Pepper	19-Jun-23	evw174		YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1	100				S	
Chris Pepper	19-Jun-23	evw174		BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1	100				S	
Chris Pepper	19-Jun-23	evw174		LISP	Lincoln's Sparrow	<i>Melospiza lincolnii</i>	1	50				S	
Chris Pepper	19-Jun-23	evw174		DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1	50				S	
Chris Pepper	19-Jun-23	evw174	7:27 AM	SWTH	Swainson's Thrush	<i>Catharus ustulatus</i>	2	100				S	
Chris Pepper	19-Jun-23	evw174		BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	2	50				S	
Chris Pepper	19-Jun-23	evw174		MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	2	0				S	
Chris Pepper	19-Jun-23	evw174		YBFL	Yellow-bellied Flycatcher	<i>Empidonax flaviventris</i>	1	50				S	
Chris Pepper	19-Jun-23	evw174		BBWA	Bay-breasted Warbler	<i>Setophaga castanea</i>	1	0	N			S	
Chris Pepper	19-Jun-23	evw174		NAWA	Nashville Warbler	<i>Leiothlypis ruficapilla</i>	1	50				S	
Chris Pepper	19-Jun-23	evw174		HETH	Hermit Thrush	<i>Catharus guttatus</i>	1	100				S	
Chris Pepper	19-Jun-23	evw174		AMRO	American Robin	<i>Turdus migratorius</i>	1	100				S	
Chris Pepper	19-Jun-23	evw174		COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1	50				S	
Chris Pepper	19-Jun-23	evw174		BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1	50				S	
Chris Pepper	19-Jun-23	evw 171	7:46 AM	YBFL	Yellow-bellied Flycatcher	<i>Empidonax flaviventris</i>	2	50				S	
Chris Pepper	19-Jun-23	evw 171		BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1	50				S	
Chris Pepper	19-Jun-23	evw 171		RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1	50	W			S	
Chris Pepper	19-Jun-23	evw 171		WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1	50				S	
Chris Pepper	19-Jun-23	evw 171		BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1	0				S	
Chris Pepper	19-Jun-23	evw 171		BOCH	Boreal Chickadee	<i>Poecile hudsonicus</i>	1	0	E			H	
Chris Pepper	19-Jun-23	evw 171		NAWA	Nashville Warbler	<i>Leiothlypis ruficapilla</i>	1	50				S	
Chris Pepper	19-Jun-23	evw 171		HETH	Hermit Thrush	<i>Catharus guttatus</i>	1	0				H	
Chris Pepper	19-Jun-23	evw 171		DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1	0				H	
Chris Pepper	19-Jun-23	evw 171		MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	1	100				S	
Chris Pepper	19-Jun-23	evw 171		BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1	100				S	
Chris Pepper	19-Jun-23	evw 171		YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	2	0				S	
Chris Pepper	19-Jun-23	evw 171		AMRE	American Redstart	<i>Setophaga ruticilla</i>	1	0				S	
Chris Pepper	19-Jun-23	evw 171		CAJA	Canada Jay	<i>Perisoreus canadensis</i>	1	50	S			H	
Chris Pepper	19-Jun-23	evw 171		BLJA	Blue Jay	<i>Cyanocitta cristata</i>	1	100				H	
Chris Pepper	19-Jun-23	evw 171		RUGR	Ruffed Grouse	<i>Bonasa umbellus</i>	1	50				H	
Chris Pepper	19-Jun-23	evw 195	7:58 AM	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1	50				S	
Chris Pepper	19-Jun-23	evw 195		COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1	0				S	
Chris Pepper	19-Jun-23	evw 195		WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	2	50				S	
Chris Pepper	19-Jun-23	evw 195		YBFL	Yellow-bellied Flycatcher	<i>Empidonax flaviventris</i>	1	0				S	
Chris Pepper	19-Jun-23	evw 195		MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	3	0				S	
Chris Pepper	19-Jun-23	evw 195		BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1	0				S	
Chris Pepper	19-Jun-23	evw 195		CAWA	Canada Warbler	<i>Cardellina canadensis</i>	1	100	S			S	
Chris Pepper	19-Jun-23	evw 195		RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1	0	SW			S	
Chris Pepper	19-Jun-23	evw 195		HETH	Hermit Thrush	<i>Catharus guttatus</i>	2	0				S	
Chris Pepper	19-Jun-23	evw 195		YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1	50				H	
Chris Pepper	19-Jun-23	evw 195		PUFI	Purple Finch	<i>Haemorhous purpureus</i>	1	50				H	
Chris Pepper	19-Jun-23	evw 195		PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1	50				S	
Chris Pepper	19-Jun-23	evw 195		ALFL	Alder Flycatcher	<i>Empidonax alnorum</i>	1	0				S	
Chris Pepper	19-Jun-23	evw 195		AMCR	American Crow	<i>Corvus brachyrhynchos</i>	1	500				H	
Chris Pepper	19-Jun-23	evw 195		SWTH	Swainson's Thrush	<i>Catharus ustulatus</i>	1	100				S	
Chris Pepper	19-Jun-23	evw 195		BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1	50				S	
Chris Pepper	19-Jun-23	evw 172	8:13 AM	CAWA	Canada Warbler	<i>Cardellina canadensis</i>	1	0	W			S	
Chris Pepper	19-Jun-23	evw 172		YBFL	Yellow-bellied Flycatcher	<i>Empidonax flaviventris</i>	1	0				S	
Chris Pepper	19-Jun-23	evw 172		AMRE	American Redstart	<i>Setophaga ruticilla</i>	1	0				S	
Chris Pepper	19-Jun-23	evw 172		RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1	0	E			S	
Chris Pepper	19-Jun-23	evw 172		NAWA	Nashville Warbler	<i>Leiothlypis ruficapilla</i>	1	0				S	
Chris Pepper	19-Jun-23	evw 172		YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1	0				S	
Chris Pepper	19-Jun-23	evw 172		NOFL	Northern Flicker	<i>Colaptes auratus</i>	1	100				H	
Chris Pepper	19-Jun-23	evw 172		MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	2	50				S	
Chris Pepper	19-Jun-23	evw 172		PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1	50				S	
Chris Pepper	19-Jun-23	evw 172		BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	2	100				S	
Chris Pepper	19-Jun-23	evw 172		CAJA	Canada Jay	<i>Perisoreus canadensis</i>	1	100	NE			H	
Chris Pepper	19-Jun-23	evw 170	8:28 AM	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	3	0				S	
Chris Pepper	19-Jun-23	evw 170		GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	0				S	

Table 8: 2023 Breeding Bird Point Count Survey Results - Harbour Hills Wind Project

Observer	Date	Survey Location	Survey Start Time	Species Code	Common Name	Scientific Name	#	Distance (m)	Bearing	Flyover Height (m)	Flight Direction	Breeding Evidence ¹	Comments
Chris Pepper	19-Jun-23	evw 170		YBFL	Yellow-bellied Flycatcher	<i>Empidonax flaviventris</i>	2	0				S	
Chris Pepper	19-Jun-23	evw 170		MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	2	50				S	
Chris Pepper	19-Jun-23	evw 170		CAJA	Canada Jay	<i>Perisoreus canadensis</i>	1	100	N			H	
Chris Pepper	19-Jun-23	evw 170		BBWA	Bay-breasted Warbler	<i>Setophaga castanea</i>	1	50	S			S	
Chris Pepper	19-Jun-23	evw 170		HETH	Hermit Thrush	<i>Catharus guttatus</i>	1	50				S	
Chris Pepper	19-Jun-23	evw 170		AMRE	American Redstart	<i>Setophaga ruticilla</i>	1	0				H	
Chris Pepper	19-Jun-23	evw 170		YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1	0				H	
Chris Pepper	19-Jun-23	evw 168	9:07 AM	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1	50				S	
Chris Pepper	19-Jun-23	evw 168		SWTH	Swainson's Thrush	<i>Catharus ustulatus</i>	2	100				S	
Chris Pepper	19-Jun-23	evw 168		AMRE	American Redstart	<i>Setophaga ruticilla</i>	2	0				S	
Chris Pepper	19-Jun-23	evw 168		NAWA	Nashville Warbler	<i>Leiothlypis ruficapilla</i>	1	0				S	
Chris Pepper	19-Jun-23	evw 168		COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1	50				S	
Chris Pepper	19-Jun-23	evw 168		PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1	50				S	
Chris Pepper	19-Jun-23	evw 168		RUGR	Ruffed Grouse	<i>Bonasa umbellus</i>	1	50				H	
Chris Pepper	19-Jun-23	evw 168		NOFL	Northern Flicker	<i>Colaptes auratus</i>	1	100				H	
Chris Pepper	19-Jun-23	evw 168		BBWA	Bay-breasted Warbler	<i>Setophaga castanea</i>	1	0	N			S	
Chris Pepper	19-Jun-23	evw 168		OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	1	100				S	
Chris Pepper	19-Jun-23	evw 168		WIWR	Winter Wren	<i>Troglodytes hiemalis</i>	1	100				S	
Chris Pepper	19-Jun-23	evw 168		ALFL	Alder Flycatcher	<i>Empidonax alnorum</i>	1	100				H	
Chris Pepper	19-Jun-23	evw 168		RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1	100	W			S	
Chris Pepper	19-Jun-23	evw 168		MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	1	50				S	
Chris Pepper	19-Jun-23	evw 168		NSWO	Northern Saw-whet Owl	<i>Aegolius acadicus</i>	1	100	NW			S	
Chris Pepper	19-Jun-23	evw 168		CAWA	Canada Warbler	<i>Cardellina canadensis</i>	1	0	SW			S	
Chris Pepper	19-Jun-23	evw 168		YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1	50				S	
Chris Pepper	19-Jun-23	evw 167	9:22 AM	SWTH	Swainson's Thrush	<i>Catharus ustulatus</i>	1	100				S	
Chris Pepper	19-Jun-23	evw 167		AMRE	American Redstart	<i>Setophaga ruticilla</i>	2	0				S	
Chris Pepper	19-Jun-23	evw 167		BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1	50				S	
Chris Pepper	19-Jun-23	evw 167		REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	1	50				S	
Chris Pepper	19-Jun-23	evw 167		OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	1	100				S	
Chris Pepper	19-Jun-23	evw 167		WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1	100				S	
Chris Pepper	19-Jun-23	evw 167		BBWA	Bay-breasted Warbler	<i>Setophaga castanea</i>	1	0	W			S	
Chris Pepper	19-Jun-23	evw 167		GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	0				S	
Chris Pepper	19-Jun-23	evw 167		BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1	0				S	
Chris Pepper	19-Jun-23	evw 167		MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	1	0				S	
Chris Pepper	19-Jun-23	evw 167		YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1	0				S	
Chris Pepper	19-Jun-23	evw 167		BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1	0				S	
Chris Pepper	19-Jun-23	evw 167		HETH	Hermit Thrush	<i>Catharus guttatus</i>	1	100				S	
Chris Pepper	19-Jun-23	evw 164	9:40 AM	HETH	Hermit Thrush	<i>Catharus guttatus</i>	1	100				S	
Chris Pepper	19-Jun-23	evw 164		WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1	50				S	
Chris Pepper	19-Jun-23	evw 164		COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	2	50				S	
Chris Pepper	19-Jun-23	evw 164		NAWA	Nashville Warbler	<i>Leiothlypis ruficapilla</i>	2	0				S	
Chris Pepper	19-Jun-23	evw 164		YBFL	Yellow-bellied Flycatcher	<i>Empidonax flaviventris</i>	1	50				S	
Chris Pepper	19-Jun-23	evw 164		SWTH	Swainson's Thrush	<i>Catharus ustulatus</i>	1	50				S	
Chris Pepper	19-Jun-23	evw 164		PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1	0				S	
Chris Pepper	19-Jun-23	evw 164		ALFL	Alder Flycatcher	<i>Empidonax alnorum</i>	2	0				S	
Chris Pepper	19-Jun-23	evw 164		AMGO	American Goldfinch	<i>Spinus tristis</i>	1	50				S	
Chris Pepper	19-Jun-23	evw 164		DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1	0				S	
Chris Pepper	19-Jun-23	evw 164		BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	2	0				S	
Chris Pepper	19-Jun-23	evw 164		BLJA	Blue Jay	<i>Cyanocitta cristata</i>	1	100				H	
Chris Pepper	19-Jun-23	evw 164		RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1	100	SE			S	
Chris Pepper	19-Jun-23	evw 164		MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	1	100				S	
Chris Pepper	19-Jun-23	evw 164		BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1	100				S	
Chris Pepper	19-Jun-23	evw 164		TRES	Tree Swallow	<i>Tachycineta bicolor</i>	3	50	SE			X	
Chris Pepper	19-Jun-23	evw 164		BARS	Barn Swallow	<i>Hirundo rustica</i>	2	50	S			X	
Chris Pepper	20-Jun-23	evw 158	5:36 AM	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	2	50				S	
Chris Pepper	20-Jun-23	evw 158		WIWR	Winter Wren	<i>Troglodytes hiemalis</i>	1	100				S	
Chris Pepper	20-Jun-23	evw 158		AMRE	American Redstart	<i>Setophaga ruticilla</i>	1	50				S	
Chris Pepper	20-Jun-23	evw 158		AMCR	American Crow	<i>Corvus brachyrhynchos</i>	1	250				H	
Chris Pepper	20-Jun-23	evw 158		WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1	50				S	
Chris Pepper	20-Jun-23	evw 158		GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	0				H	
Chris Pepper	20-Jun-23	evw 158		BTBW	Black-throated Blue Warbler	<i>Setophaga caerulescens</i>	1	0				S	
Chris Pepper	20-Jun-23	evw 158		WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	2	0				H	
Chris Pepper	20-Jun-23	evw 158		BLJA	Blue Jay	<i>Cyanocitta cristata</i>	1	0				H	
Chris Pepper	20-Jun-23	evw 158		OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	1	0				S	
Chris Pepper	20-Jun-23	evw 158		BBWA	Bay-breasted Warbler	<i>Setophaga castanea</i>	1	0	S			S	
Chris Pepper	20-Jun-23	evw 158		BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1	50				S	
Chris Pepper	20-Jun-23	evw 159	5:50 AM	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	1	500				X	
Chris Pepper	20-Jun-23	evw 159		HETH	Hermit Thrush	<i>Catharus guttatus</i>	1	100				S	
Chris Pepper	20-Jun-23	evw 159		RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1	100	SE			S	
Chris Pepper	20-Jun-23	evw 159		N/A	Woodpecker Sp.	N/A	1	100				H	
Chris Pepper	20-Jun-23	evw 159		ALFL	Alder Flycatcher	<i>Empidonax alnorum</i>	1	50				H	
Chris Pepper	20-Jun-23	evw 159		WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1	100				S	
Chris Pepper	20-Jun-23	evw 159		BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1	0				S	

Table 8: 2023 Breeding Bird Point Count Survey Results - Harbour Hills Wind Project

Observer	Date	Survey Location	Survey Start Time	Species Code	Common Name	Scientific Name	#	Distance (m)	Bearing	Flyover Height (m)	Flight Direction	Breeding Evidence ¹	Comments
Chris Pepper	20-Jun-23	evw 159		MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	2	50				S	
Chris Pepper	20-Jun-23	evw 159		HAWO	Hairy Woodpecker	<i>Dryobates villosus</i>	1	50				H	
Chris Pepper	20-Jun-23	evw 159		YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	2	50				S	
Chris Pepper	20-Jun-23	evw 159		BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1	50				S	
Chris Pepper	20-Jun-23	evw 159		YBFL	Yellow-bellied Flycatcher	<i>Empidonax flaviventris</i>	1	50				S	
Chris Pepper	20-Jun-23	evw 159		WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1	100				S	
Chris Pepper	20-Jun-23	evw 161	6:08 AM	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	1	0				S	
Chris Pepper	20-Jun-23	evw 161		AMRE	American Redstart	<i>Setophaga ruticilla</i>	1	0				S	
Chris Pepper	20-Jun-23	evw 161		N/A	Woodpecker Sp.	N/A	1	250				H	
Chris Pepper	20-Jun-23	evw 161		SWTH	Swainson's Thrush	<i>Catharus ustulatus</i>	1	100				S	
Chris Pepper	20-Jun-23	evw 161		COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1	100				S	
Chris Pepper	20-Jun-23	evw 161		WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	2	0				S	
Chris Pepper	20-Jun-23	evw 161		BLJA	Blue Jay	<i>Cyanocitta cristata</i>	1	100				H	
Chris Pepper	20-Jun-23	evw 161		HETH	Hermit Thrush	<i>Catharus guttatus</i>	2	100				S	
Chris Pepper	20-Jun-23	evw 161		BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1	0				S	
Chris Pepper	20-Jun-23	evw 161		RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1	100	SW			S	
Chris Pepper	20-Jun-23	evw 161		NOFL	Northern Flicker	<i>Colaptes auratus</i>	1	100				H	
Chris Pepper	20-Jun-23	evw 161		BCCH	Black-capped Chickadee	<i>Poecile atricapillus</i>	1	100				S	
Chris Pepper	20-Jun-23	evw 163	6:27 AM	PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1	0				S	
Chris Pepper	20-Jun-23	evw 163		MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	2	50				S	
Chris Pepper	20-Jun-23	evw 163		NAWA	Nashville Warbler	<i>Leiothlypis rufigapilla</i>	2	50				S	
Chris Pepper	20-Jun-23	evw 163		COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1	0				S	
Chris Pepper	20-Jun-23	evw 163		ALFL	Alder Flycatcher	<i>Empidonax alnorum</i>	2	0				S	
Chris Pepper	20-Jun-23	evw 163		YBFL	Yellow-bellied Flycatcher	<i>Empidonax flaviventris</i>	2	100				S	
Chris Pepper	20-Jun-23	evw 163		NOFL	Northern Flicker	<i>Colaptes auratus</i>	1	100				H	
Chris Pepper	20-Jun-23	evw 163		WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1	50				S	
Chris Pepper	20-Jun-23	evw 163		BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1	0				S	
Chris Pepper	20-Jun-23	evw 163		GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	0				S	
Chris Pepper	20-Jun-23	evw 163		BCCH	Black-capped Chickadee	<i>Poecile atricapillus</i>	2	0				H	
Chris Pepper	20-Jun-23	evw 163		CAWA	Canada Warbler	<i>Cardellina canadensis</i>	1	50	S			S	
Chris Pepper	20-Jun-23	evw 162	6:44 AM	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	2	100				S	
Chris Pepper	20-Jun-23	evw 162		COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	2	100				S	
Chris Pepper	20-Jun-23	evw 162		CAWA	Canada Warbler	<i>Cardellina canadensis</i>	1	100	W				
Chris Pepper	20-Jun-23	evw 162		RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1	100	NW			S	
Chris Pepper	20-Jun-23	evw 162		ALFL	Alder Flycatcher	<i>Empidonax alnorum</i>	2	0				S	
Chris Pepper	20-Jun-23	evw 162		SWSP	Swamp Sparrow	<i>Melospiza georgiana</i>	1	50				S	
Chris Pepper	20-Jun-23	evw 162		PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1	0				S	
Chris Pepper	20-Jun-23	evw 162		WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	2	100				S	
Chris Pepper	20-Jun-23	evw 162		AMRE	American Redstart	<i>Setophaga ruticilla</i>	1	50				S	
Chris Pepper	20-Jun-23	evw 162		BCCH	Black-capped Chickadee	<i>Poecile atricapillus</i>	1	100				S	
Chris Pepper	20-Jun-23	evw 162		GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	100				S	
Chris Pepper	20-Jun-23	evw 162		BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1	0				S	
Chris Pepper	20-Jun-23	evw 160	6:58 AM	BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1	50				S	
Chris Pepper	20-Jun-23	evw 160		AMRE	American Redstart	<i>Setophaga ruticilla</i>	1	0				S	
Chris Pepper	20-Jun-23	evw 160		PIWO	Pileated Woodpecker	<i>Dryocopus pileatus</i>	1	100				H	
Chris Pepper	20-Jun-23	evw 160		OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	2	50				S	
Chris Pepper	20-Jun-23	evw 160		BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1	50				S	
Chris Pepper	20-Jun-23	evw 160		HETH	Hermit Thrush	<i>Catharus guttatus</i>	1	100				S	
Chris Pepper	20-Jun-23	evw 160		SWTH	Swainson's Thrush	<i>Catharus ustulatus</i>	1	0				S	
Chris Pepper	20-Jun-23	evw 160		BBWA	Bay-breasted Warbler	<i>Setophaga castanea</i>	1	100	S			S	
Chris Pepper	20-Jun-23	evw 160		MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	1	100				S	
Chris Pepper	20-Jun-23	evw 160		GRYE	Greater Yellowlegs	<i>Tringa melanoleuca</i>	1	0	E	-50	west	S	Flew by singing
Chris Pepper	20-Jun-23	evw 160		GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	50				S	
Chris Pepper	20-Jun-23	evw 160		WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1	100				S	
Chris Pepper	20-Jun-23	evw 160		COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1	100				S	
Chris Pepper	20-Jun-23	evw 154	7:18 AM	SWTH	Swainson's Thrush	<i>Catharus ustulatus</i>	1	100				S	
Chris Pepper	20-Jun-23	evw 154		AMCR	American Crow	<i>Corvus brachyrhynchos</i>	2	250				X	
Chris Pepper	20-Jun-23	evw 154		BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	2	50				S	
Chris Pepper	20-Jun-23	evw 154		BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	2	0				S	
Chris Pepper	20-Jun-23	evw 154		WIWR	Winter Wren	<i>Troglodytes hiemalis</i>	1	100				S	
Chris Pepper	20-Jun-23	evw 154		BLBW	Blackburnian Warbler	<i>Setophaga fusca</i>	1	50				S	
Chris Pepper	20-Jun-23	evw 154		MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	2	0				S	
Chris Pepper	20-Jun-23	evw 154		WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	2	0				A	
Chris Pepper	20-Jun-23	evw 154		DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1	0				H	
Chris Pepper	20-Jun-23	evw 154		HETH	Hermit Thrush	<i>Catharus guttatus</i>	1	0				H	
Chris Pepper	20-Jun-23	evw 154		COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1	0				A	
Chris Pepper	20-Jun-23	evw 154		BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1	0				S	
Chris Pepper	20-Jun-23	evw 155	7:36 AM	BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1	50				S	
Chris Pepper	20-Jun-23	evw 155		MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	1	50				S	
Chris Pepper	20-Jun-23	evw 155		BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1	50				S	
Chris Pepper	20-Jun-23	evw 155		AMRE	American Redstart	<i>Setophaga ruticilla</i>	1	50				S	
Chris Pepper	20-Jun-23	evw 155		WIWR	Winter Wren	<i>Troglodytes hiemalis</i>	1	100				S	
Chris Pepper	20-Jun-23	evw 155		REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	1	100				S	

Table 8: 2023 Breeding Bird Point Count Survey Results - Harbour Hills Wind Project

Observer	Date	Survey Location	Survey Start Time	Species Code	Common Name	Scientific Name	#	Distance (m)	Bearing	Flyover Height (m)	Flight Direction	Breeding Evidence ¹	Comments
Chris Pepper	20-Jun-23	evw 155		COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1	0				S	
Chris Pepper	20-Jun-23	evw 155		WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1	50				S	
Chris Pepper	20-Jun-23	evw 189	7:52 AM	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	2	0				S	
Chris Pepper	20-Jun-23	evw 189		ALFL	Alder Flycatcher	<i>Empidonax alnorum</i>	1	50				S	
Chris Pepper	20-Jun-23	evw 189		WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1	50				S	
Chris Pepper	20-Jun-23	evw 189		OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	1	50				S	
Chris Pepper	20-Jun-23	evw 189		HETH	Hermit Thrush	<i>Catharus guttatus</i>	1	50				S	
Chris Pepper	20-Jun-23	evw 189		NAWA	Nashville Warbler	<i>Leiothlypis ruficapilla</i>	1	100				S	
Chris Pepper	20-Jun-23	evw 189		YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1	50				S	
Chris Pepper	20-Jun-23	evw 189		PAWA	Palm Warbler	<i>Setophaga palmarum</i>	2	50				S	
Chris Pepper	20-Jun-23	evw 189		AMRE	American Redstart	<i>Setophaga ruticilla</i>	1	0				S	
Chris Pepper	20-Jun-23	evw 189		COLO	Common Loon	<i>Gavia immer</i>	1	1000				X	
Chris Pepper	20-Jun-23	evw 189		YBFL	Yellow-bellied Flycatcher	<i>Empidonax flaviventris</i>	1	50				H	
Chris Pepper	20-Jun-23	evw 153	8:05 AM	AMRE	American Redstart	<i>Setophaga ruticilla</i>	1	50				S	
Chris Pepper	20-Jun-23	evw 153		COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1	50				S	
Chris Pepper	20-Jun-23	evw 153		BOCH	Boreal Chickadee	<i>Poecile hudsonicus</i>	1	50	N			H	
Chris Pepper	20-Jun-23	evw 153		BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1	50				S	
Chris Pepper	20-Jun-23	evw 153		NAWA	Nashville Warbler	<i>Leiothlypis ruficapilla</i>	1	50					
Chris Pepper	20-Jun-23	evw 153		CSWA	Chestnut-sided Warbler	<i>Setophaga pensylvanica</i>	1	0				S	
Chris Pepper	20-Jun-23	evw 153		WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	2	50				S	
Chris Pepper	20-Jun-23	evw 153		RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1	100	N			S	
Chris Pepper	20-Jun-23	evw 153		MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	2	50				S	
Chris Pepper	20-Jun-23	evw 153		PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1	0				S	
Chris Pepper	20-Jun-23	evw 153		YBFL	Yellow-bellied Flycatcher	<i>Empidonax flaviventris</i>	1	50				S	
Chris Pepper	20-Jun-23	evw 196	8:18 AM	HETH	Hermit Thrush	<i>Catharus guttatus</i>	1	50				H	
Chris Pepper	20-Jun-23	evw 196		CAJA	Canada Jay	<i>Perisoreus canadensis</i>	1	100	NE			H	
Chris Pepper	20-Jun-23	evw 196		PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1	50				S	
Chris Pepper	20-Jun-23	evw 196		ALFL	Alder Flycatcher	<i>Empidonax alnorum</i>	1	100				S	
Chris Pepper	20-Jun-23	evw 196		YBFL	Yellow-bellied Flycatcher	<i>Empidonax flaviventris</i>	2	50				S	
Chris Pepper	20-Jun-23	evw 196		RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1	100	SW			S	
Chris Pepper	20-Jun-23	evw 196		WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	3	100				S	
Chris Pepper	20-Jun-23	evw 196		PUFI	Purple Finch	<i>Haemorhous purpureus</i>	1	50				H	
Chris Pepper	20-Jun-23	evw 196		CAWA	Canada Warbler	<i>Cardellina canadensis</i>	1	50	SW			S	
Chris Pepper	20-Jun-23	evw 196		COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	2	0				S	
Chris Pepper	20-Jun-23	evw 196		NOFL	Northern Flicker	<i>Colaptes auratus</i>	1	0				H	
Chris Pepper	20-Jun-23	evw 157	8:32 AM	ALFL	Alder Flycatcher	<i>Empidonax alnorum</i>	1	100				H	
Chris Pepper	20-Jun-23	evw 157		COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	2	50				S	
Chris Pepper	20-Jun-23	evw 157		MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	2	50				S	
Chris Pepper	20-Jun-23	evw 157		BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1	50				S	
Chris Pepper	20-Jun-23	evw 157		BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1	100				S	
Chris Pepper	20-Jun-23	evw 157		YBFL	Yellow-bellied Flycatcher	<i>Empidonax flaviventris</i>	2	100				S	
Chris Pepper	20-Jun-23	evw 157		WIWR	Winter Wren	<i>Troglodytes hiemalis</i>	1	100				S	
Chris Pepper	20-Jun-23	evw 157		SWTH	Swainson's Thrush	<i>Catharus ustulatus</i>	1	100				S	
Chris Pepper	20-Jun-23	evw 157		WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	3	50				S	
Chris Pepper	20-Jun-23	Evw 156	9:09 AM	OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	1	250				S	
Chris Pepper	20-Jun-23	Evw 156		PIWO	Pileated Woodpecker	<i>Dryocopus pileatus</i>	1	250				H	
Chris Pepper	20-Jun-23	Evw 156		NAWA	Nashville Warbler	<i>Leiothlypis ruficapilla</i>	1	100				S	
Chris Pepper	20-Jun-23	Evw 156		LISP	Lincoln's Sparrow	<i>Melospiza lincolni</i>	1	50				S	
Chris Pepper	20-Jun-23	Evw 156		YBFL	Yellow-bellied Flycatcher	<i>Empidonax flaviventris</i>	1	100				S	
Chris Pepper	20-Jun-23	Evw 156		RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1	100	N			S	
Chris Pepper	20-Jun-23	Evw 156		PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1	50				S	
Chris Pepper	20-Jun-23	Evw 156		WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1	100				S	
Chris Pepper	20-Jun-23	Evw 156		BBWA	Bay-breasted Warbler	<i>Setophaga castanea</i>	1	100	SW			S	
Chris Pepper	20-Jun-23	Evw 156		BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1	100				S	
Chris Pepper	20-Jun-23	Evw 156		SWTH	Swainson's Thrush	<i>Catharus ustulatus</i>	1	100				S	
Chris Pepper	20-Jun-23	Evw 156		GRYE	Greater Yellowlegs	<i>Tringa melanoleuca</i>	1	0	NW			A	Singing and divebombing
Chris Pepper	20-Jun-23	evw 214	9:55 AM	BTBW	Black-throated Blue Warbler	<i>Setophaga caeruleascens</i>	1	50				S	
Chris Pepper	20-Jun-23	evw 214		NOPA	Northern Parula	<i>Setophaga americana</i>	1	50				S	
Chris Pepper	20-Jun-23	evw 214		AMCR	American Crow	<i>Corvus brachyrhynchos</i>	1	250				H	
Chris Pepper	20-Jun-23	evw 214		OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	1	100				S	
Chris Pepper	20-Jun-23	evw 214		BLBW	Blackburnian Warbler	<i>Setophaga fusca</i>	1	100				S	
Chris Pepper	20-Jun-23	evw 214		BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1	50				S	
Chris Pepper	27-Jun-23	evw 136	5:38 AM	BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1	50				S	
Chris Pepper	27-Jun-23	evw 136		YBFL	Yellow-bellied Flycatcher	<i>Empidonax flaviventris</i>	1	50				S	
Chris Pepper	27-Jun-23	evw 136		WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1	50				S	
Chris Pepper	27-Jun-23	evw 136		NAWA	Nashville Warbler	<i>Leiothlypis ruficapilla</i>	2	50				S	
Chris Pepper	27-Jun-23	evw 136		PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1	50				S	
Chris Pepper	27-Jun-23	evw 136		COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	2	0				S	
Chris Pepper	27-Jun-23	evw 137	5:53 AM	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	2	0				S	
Chris Pepper	27-Jun-23	evw 137		YBFL	Yellow-bellied Flycatcher	<i>Empidonax flaviventris</i>	2	50				S	
Chris Pepper	27-Jun-23	evw 137		HETH	Hermit Thrush	<i>Catharus guttatus</i>	2	50				S	
Chris Pepper	27-Jun-23	evw 137		SWTH	Swainson's Thrush	<i>Catharus ustulatus</i>	1	100				S	

Table 8: 2023 Breeding Bird Point Count Survey Results - Harbour Hills Wind Project

Observer	Date	Survey Location	Survey Start Time	Species Code	Common Name	Scientific Name	#	Distance (m)	Bearing	Flyover Height (m)	Flight Direction	Breeding Evidence ¹	Comments
Chris Pepper	27-Jun-23	evw 137		COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1	50				S	
Chris Pepper	27-Jun-23	evw 137		MOWA	Mourning Warbler	<i>Geothlypis philadelphia</i>	1	100				S	
Chris Pepper	27-Jun-23	evw 137		MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	1	0				S	
Chris Pepper	27-Jun-23	evw 137		PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1	0				S	
Chris Pepper	27-Jun-23	evw 138	6:08 AM	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1	0				S	
Chris Pepper	27-Jun-23	evw 138		BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1	0				S	
Chris Pepper	27-Jun-23	evw 138		WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1	50				S	
Chris Pepper	27-Jun-23	evw 138		BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	2	0				S	
Chris Pepper	27-Jun-23	evw 138		PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1	0				S	
Chris Pepper	27-Jun-23	evw 138		YBFL	Yellow-bellied Flycatcher	<i>Empidonax flaviventris</i>	2	100				S	
Chris Pepper	27-Jun-23	evw 138		RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1	100	NW			S	
Chris Pepper	27-Jun-23	evw 138		MOWA	Mourning Warbler	<i>Geothlypis philadelphia</i>	1	100				S	
Chris Pepper	27-Jun-23	evw 138		CAJA	Canada Jay	<i>Perisoreus canadensis</i>	2	0				H	
Chris Pepper	27-Jun-23	evw 138		DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1	0				A	
Chris Pepper	27-Jun-23	evw 138		HETH	Hermit Thrush	<i>Catharus guttatus</i>	1	0				CF	
Chris Pepper	27-Jun-23	evw 139	6:31 AM	AMRE	American Redstart	<i>Setophaga ruticilla</i>	1	50				S	
Chris Pepper	27-Jun-23	evw 139		WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1	100				S	
Chris Pepper	27-Jun-23	evw 139		ALFL	Alder Flycatcher	<i>Empidonax alnorum</i>	1	100				S	
Chris Pepper	27-Jun-23	evw 139		MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	1	50				S	
Chris Pepper	27-Jun-23	evw 139		PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1	50				S	
Chris Pepper	27-Jun-23	evw 139		GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	0				H	
Chris Pepper	27-Jun-23	evw 139		HETH	Hermit Thrush	<i>Catharus guttatus</i>	1	100				S	
Chris Pepper	27-Jun-23	evw 139		REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	1	100				S	
Chris Pepper	27-Jun-23	evw 139		BOCH	Black-capped Chickadee	<i>Poecile atricapillus</i>	1	100				H	
Chris Pepper	27-Jun-23	evw 139		BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1	50				S	
Chris Pepper	27-Jun-23	evw 139		BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1	50				S	
Chris Pepper	27-Jun-23	evw 139		HETH	Hermit Thrush	<i>Catharus guttatus</i>	1	100				S	
Chris Pepper	27-Jun-23	evw 140	6:47 AM	PAWA	Palm Warbler	<i>Setophaga palmarum</i>	2	0				S	
Chris Pepper	27-Jun-23	evw 140		BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1	0				S	
Chris Pepper	27-Jun-23	evw 140		ALFL	Alder Flycatcher	<i>Empidonax alnorum</i>	2	50				S	
Chris Pepper	27-Jun-23	evw 140		WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	3	0				S	
Chris Pepper	27-Jun-23	evw 140		RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1	100	SW			S	
Chris Pepper	27-Jun-23	evw 140		BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1	100				S	
Chris Pepper	27-Jun-23	evw 140		YBFL	Yellow-bellied Flycatcher	<i>Empidonax flaviventris</i>	2	100				S	
Chris Pepper	27-Jun-23	evw 140		NOFL	Northern Flicker	<i>Colaptes auratus</i>	1	100				H	
Chris Pepper	27-Jun-23	evw 140		HETH	Hermit Thrush	<i>Catharus guttatus</i>	1	0				S	
Chris Pepper	27-Jun-23	evw 140		COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	2	0				S	
Chris Pepper	27-Jun-23	evw 140		MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	2	0				S	
Chris Pepper	27-Jun-23	evw 140		YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1	0				S	
Chris Pepper	27-Jun-23	evw 140		AMRE	American Redstart	<i>Setophaga ruticilla</i>	1	0				H	
Chris Pepper	27-Jun-23	evw 140		DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1	50				S	
Chris Pepper	27-Jun-23	evw 141	7:04 AM	AMRE	American Redstart	<i>Setophaga ruticilla</i>	1	50				S	
Chris Pepper	27-Jun-23	evw 141		NOFL	Northern Flicker	<i>Colaptes auratus</i>	1	100				H	
Chris Pepper	27-Jun-23	evw 141		WIWR	Winter Wren	<i>Troglodytes hiemalis</i>	1	100				S	
Chris Pepper	27-Jun-23	evw 141		MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	1	50				S	
Chris Pepper	27-Jun-23	evw 141		COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1	100				S	
Chris Pepper	27-Jun-23	evw 141		PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1	50				S	
Chris Pepper	27-Jun-23	evw 141		YBFL	Yellow-bellied Flycatcher	<i>Empidonax flaviventris</i>	1	100				S	
Chris Pepper	27-Jun-23	evw 141		BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1	100				S	
Chris Pepper	27-Jun-23	evw 141		WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	2	100				S	
Chris Pepper	27-Jun-23	evw 141		DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1	100				S	
Chris Pepper	27-Jun-23	evw 141		YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	2	0				H	
Chris Pepper	27-Jun-23	evw 135	7:35 AM	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1	50				S	
Chris Pepper	27-Jun-23	evw 135		BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1	50				S	
Chris Pepper	27-Jun-23	evw 135		PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1	50				S	
Chris Pepper	27-Jun-23	evw 135		COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1	0				S	
Chris Pepper	27-Jun-23	evw 135		YBFL	Yellow-bellied Flycatcher	<i>Empidonax flaviventris</i>	1	50				S	
Chris Pepper	27-Jun-23	evw 135		LEFL	Least Flycatcher	<i>Empidonax minimus</i>	1	50				S	
Chris Pepper	27-Jun-23	evw 135		YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1	0				S	
Chris Pepper	27-Jun-23	evw 135		HETH	Hermit Thrush	<i>Catharus guttatus</i>	2	0				H	
Chris Pepper	27-Jun-23	evw 135		PUFI	Purple Finch	<i>Haemorhous purpureus</i>	1	50				H	
Chris Pepper	27-Jun-23	evw 135		BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1	50				S	
Chris Pepper	27-Jun-23	evw 135		BOCH	Boreal Chickadee	<i>Poecile hudsonicus</i>	1	0	SE			H	
Chris Pepper	27-Jun-23	evw 133	7:51 AM	BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1	0				S	
Chris Pepper	27-Jun-23	evw 133		MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	1	0				S	
Chris Pepper	27-Jun-23	evw 133		YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1	0				S	
Chris Pepper	27-Jun-23	evw 133		BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1	50				S	
Chris Pepper	27-Jun-23	evw 133		HETH	Hermit Thrush	<i>Catharus guttatus</i>	1	50				H	
Chris Pepper	27-Jun-23	evw 133		BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1	50				S	
Chris Pepper	27-Jun-23	evw 133		WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1	100				S	
Chris Pepper	27-Jun-23	evw 133		SWSP	Swamp Sparrow	<i>Melospiza georgiana</i>	1	0				S	
Chris Pepper	27-Jun-23	evw 133		WIWR	Winter Wren	<i>Troglodytes hiemalis</i>	1	100				S	
Chris Pepper	27-Jun-23	evw 133		NAWA	Nashville Warbler	<i>Leiothlypis ruficapilla</i>	1	50				S	

Table 8: 2023 Breeding Bird Point Count Survey Results - Harbour Hills Wind Project

Observer	Date	Survey Location	Survey Start Time	Species Code	Common Name	Scientific Name	#	Distance (m)	Bearing	Flyover Height (m)	Flight Direction	Breeding Evidence ¹	Comments
Chris Pepper	27-Jun-23	evw 133		CAJA	Canada Jay	<i>Perisoreus canadensis</i>	1	100				H	
Chris Pepper	27-Jun-23	evw 133		GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	50				S	
Chris Pepper	27-Jun-23	evw 133		PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1	100				S	
Chris Pepper	27-Jun-23	evw 133		AMRE	American Redstart	<i>Setophaga ruticilla</i>	1	50				S	
Chris Pepper	27-Jun-23	evw 132	8:08 AM	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	2	50				S	
Chris Pepper	27-Jun-23	evw 132		PAWA	Palm Warbler	<i>Setophaga palmarum</i>	2	50				S	
Chris Pepper	27-Jun-23	evw 132		AMRE	American Redstart	<i>Setophaga ruticilla</i>	2	0				S	
Chris Pepper	27-Jun-23	evw 132		BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1	100				S	
Chris Pepper	27-Jun-23	evw 132		COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	2	100				S	
Chris Pepper	27-Jun-23	evw 132		BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1	50				S	
Chris Pepper	27-Jun-23	evw 132		REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	1	50				S	
Chris Pepper	27-Jun-23	evw 132		WIWR	Winter Wren	<i>Troglodytes hiemalis</i>	1	100				S	
Chris Pepper	27-Jun-23	evw 132		OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	1	100				S	
Chris Pepper	27-Jun-23	evw 132		YBFL	Yellow-bellied Flycatcher	<i>Empidonax flaviventris</i>	1	100				S	
Chris Pepper	27-Jun-23	evw 132		MOWA	Mourning Warbler	<i>Geothlypis philadelphia</i>	1	100				S	
Chris Pepper	27-Jun-23	evw 132		MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	1	100				S	
Chris Pepper	27-Jun-23	evw 132		BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1	50				S	
Chris Pepper	27-Jun-23	evw 130	8:23 AM	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1	50				S	
Chris Pepper	27-Jun-23	evw 130		WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1	100				S	
Chris Pepper	27-Jun-23	evw 130		BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1	50				S	
Chris Pepper	27-Jun-23	evw 130		COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	2	50				S	
Chris Pepper	27-Jun-23	evw 130		NAWA	Nashville Warbler	<i>Leiothlypis ruficapilla</i>	1	50				S	
Chris Pepper	27-Jun-23	evw 130		PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1	100				S	
Chris Pepper	27-Jun-23	evw 130		HETH	Hermit Thrush	<i>Catharus guttatus</i>	2	100				S	
Chris Pepper	27-Jun-23	evw 130		RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1	100	N			S	
Chris Pepper	27-Jun-23	evw 130		BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1	100				S	
Chris Pepper	27-Jun-23	evw 130		AMRE	American Redstart	<i>Setophaga ruticilla</i>	1	100				S	
Chris Pepper	27-Jun-23	evw 130		MOWA	Mourning Warbler	<i>Geothlypis philadelphia</i>	2	0				S	
Chris Pepper	27-Jun-23	evw 130		BBWA	Bay-breasted Warbler	<i>Setophaga castanea</i>	1	50	S			S	
Chris Pepper	27-Jun-23	evw 130		NOVA	Northern Waterthrush	<i>Parkesia noveboracensis</i>	1	100				S	
Chris Pepper	27-Jun-23	evw 130		WIWR	Winter Wren	<i>Troglodytes hiemalis</i>	1	100				S	
Chris Pepper	27-Jun-23	evw 130		SWTH	Swainson's Thrush	<i>Catharus ustulatus</i>	1	50				H	
Chris Pepper	27-Jun-23	evw 118	8:39 AM	YBFL	Yellow-bellied Flycatcher	<i>Empidonax flaviventris</i>	1	50				S	Water high, hard to hear birds
Chris Pepper	27-Jun-23	evw 118		YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1	50				S	
Chris Pepper	27-Jun-23	evw 118		BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	2	100				S	
Chris Pepper	27-Jun-23	evw 118		GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	2	50				S	
Chris Pepper	27-Jun-23	evw 118		HETH	Hermit Thrush	<i>Catharus guttatus</i>	1	100				S	
Chris Pepper	27-Jun-23	evw 118		WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1	100				S	
Chris Pepper	27-Jun-23	evw 118		COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1	100				S	
Chris Pepper	27-Jun-23	evw 118		YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1	100				S	
Chris Pepper	27-Jun-23	evw 118		PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1	50				S	
Chris Pepper	27-Jun-23	evw 118		MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	1	0				S	
Chris Pepper	27-Jun-23	evw 117	8:53 AM	OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	1	0				S	
Chris Pepper	27-Jun-23	evw 117		REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	1	100				S	
Chris Pepper	27-Jun-23	evw 117		HETH	Hermit Thrush	<i>Catharus guttatus</i>	1	100				S	
Chris Pepper	27-Jun-23	evw 109	9:12 AM	HETH	Hermit Thrush	<i>Catharus guttatus</i>	1	100				S	
Chris Pepper	27-Jun-23	evw 109		WIWR	Winter Wren	<i>Troglodytes hiemalis</i>	1	100				S	
Chris Pepper	27-Jun-23	evw 109		AMRE	American Redstart	<i>Setophaga ruticilla</i>	1	100				S	
Chris Pepper	27-Jun-23	evw 109		BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1	50				S	
Chris Pepper	27-Jun-23	evw 109		BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1	50				S	
Chris Pepper	27-Jun-23	evw 109		OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	2	100				S	
Chris Pepper	27-Jun-23	evw 109		REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	1	100				S	
Chris Pepper	27-Jun-23	evw 108	9:29 AM	HETH	Hermit Thrush	<i>Catharus guttatus</i>	1	100				H	
Chris Pepper	27-Jun-23	evw 108		BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1	50				S	
Chris Pepper	27-Jun-23	evw 108		OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	2	0				S	
Chris Pepper	27-Jun-23	evw 108		REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	1	50				S	
Chris Pepper	27-Jun-23	evw 108		AMRO	American Robin	<i>Turdus migratorius</i>	1	100				S	
Chris Pepper	27-Jun-23	evw 108		PUFI	Purple Finch	<i>Haemorhous purpureus</i>	1	50				S	
Chris Pepper	28-Jun-23	evw 187	6:59 AM	NOPA	Northern Parula	<i>Setophaga americana</i>	1	50				S	
Chris Pepper	28-Jun-23	evw 187		HETH	Hermit Thrush	<i>Catharus guttatus</i>	1	100				S	
Chris Pepper	28-Jun-23	evw 187		AMRO	American Robin	<i>Turdus migratorius</i>	1	50				H	
Chris Pepper	28-Jun-23	evw 187		COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	2	0				S	
Chris Pepper	28-Jun-23	evw 187		WIWR	Winter Wren	<i>Troglodytes hiemalis</i>	1	50				S	
Chris Pepper	28-Jun-23	evw 187		AMRO	American Robin	<i>Turdus migratorius</i>	1	0				A	
Chris Pepper	28-Jun-23	evw 187		LEFL	Least Flycatcher	<i>Empidonax minimus</i>	2	0				S	
Chris Pepper	28-Jun-23	evw 187		SWTH	Swainson's Thrush	<i>Catharus ustulatus</i>	1	100				S	
Chris Pepper	28-Jun-23	evw 187		ALFL	Alder Flycatcher	<i>Empidonax alnorum</i>	1	100				S	
Chris Pepper	28-Jun-23	evw 187		NOFL	Northern Flicker	<i>Colaptes auratus</i>	1	100				H	
Chris Pepper	30-Jun-23	evw 177	5:36 AM	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	2	0				A	
Chris Pepper	30-Jun-23	evw 177		BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	2	50				S	
Chris Pepper	30-Jun-23	evw 177		GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	50				S	

Table 8: 2023 Breeding Bird Point Count Survey Results - Harbour Hills Wind Project

Observer	Date	Survey Location	Survey Start Time	Species Code	Common Name	Scientific Name	#	Distance (m)	Bearing	Flyover Height (m)	Flight Direction	Breeding Evidence ¹	Comments
Chris Pepper	30-Jun-23	evw 177		YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1	0				S	
Chris Pepper	30-Jun-23	evw 177		AMRE	American Redstart	<i>Setophaga ruticilla</i>	1	50				S	
Chris Pepper	30-Jun-23	evw 177		BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1	100				S	
Chris Pepper	30-Jun-23	evw 177		SWTH	Swainson's Thrush	<i>Catharus ustulatus</i>	2	100				S	
Chris Pepper	30-Jun-23	evw 177		MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	1	100				S	
Chris Pepper	30-Jun-23	evw 177		BCCH	Black-capped Chickadee	<i>Poecile atricapillus</i>	1	0				S	
Chris Pepper	30-Jun-23	evw 177		COTE	Common Tern	<i>Sterna hirundo</i>	3	250	E			X	
Chris Pepper	30-Jun-23	evw 177		AMCR	American Crow	<i>Corvus brachyrhynchos</i>	1	250				X	
Chris Pepper	30-Jun-23	evw 176(moved)	5:56 AM	LEFL	Least Flycatcher	<i>Empidonax minimus</i>	1	100				S	
Chris Pepper	30-Jun-23	evw 176(moved)		ALFL	Alder Flycatcher	<i>Empidonax alnorum</i>	1	100				S	
Chris Pepper	30-Jun-23	evw 176(moved)		COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	3	100				S	
Chris Pepper	30-Jun-23	evw 176(moved)		LISP	Lincoln's Sparrow	<i>Melospiza lincolni</i>	2	50				S	
Chris Pepper	30-Jun-23	evw 176(moved)		HETH	Hermit Thrush	<i>Catharus guttatus</i>	1	100				S	
Chris Pepper	30-Jun-23	evw 176(moved)		WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	2	100				S	
Chris Pepper	30-Jun-23	evw 176(moved)		MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	1	100				S	
Chris Pepper	30-Jun-23	evw 176(moved)		SOSP	Song Sparrow	<i>Melospiza melodia</i>	1	100				S	
Chris Pepper	30-Jun-23	evw 176(moved)		YEWA	Yellow Warbler	<i>Setophaga petechia</i>	1	100				S	
Chris Pepper	30-Jun-23	evw 176(moved)		SWTH	Swainson's Thrush	<i>Catharus ustulatus</i>	1	250				S	
Chris Pepper	30-Jun-23	evw 176(moved)		SAVS	Savannah Sparrow	<i>Passerculus sandwichensis</i>	2	0				A	
Chris Pepper	30-Jun-23	evw 213	6:24 AM	RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1	250	S			S	
Chris Pepper	30-Jun-23	evw 213		SAVS	Savannah Sparrow	<i>Passerculus sandwichensis</i>	1	100				S	
Chris Pepper	30-Jun-23	evw 213		COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	3	100				S	
Chris Pepper	30-Jun-23	evw 213		ALFL	Alder Flycatcher	<i>Empidonax alnorum</i>	1	100				S	
Chris Pepper	30-Jun-23	evw 213		MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	1	100				S	
Chris Pepper	30-Jun-23	evw 213		AMRO	American Robin	<i>Turdus migratorius</i>	1	100				S	
Chris Pepper	30-Jun-23	evw 213		SWSP	Swamp Sparrow	<i>Melospiza georgiana</i>	1	100				S	
Chris Pepper	30-Jun-23	evw 213		LEFL	Least Flycatcher	<i>Empidonax minimus</i>	1	250				S	
Chris Pepper	30-Jun-23	evw 213		HETH	Hermit Thrush	<i>Catharus guttatus</i>	1	250				S	
Chris Pepper	30-Jun-23	evw 213		YEWA	Yellow Warbler	<i>Setophaga petechia</i>	1	100				S	
Chris Pepper	30-Jun-23	evw 213		NAWA	Nashville Warbler	<i>Leiothlypis ruficapilla</i>	1	100				S	
Chris Pepper	30-Jun-23	evw 175	6:55 AM	NAWA	Nashville Warbler	<i>Leiothlypis ruficapilla</i>	1	50				S	
Chris Pepper	30-Jun-23	evw 175		HETH	Hermit Thrush	<i>Catharus guttatus</i>	3	50				S	
Chris Pepper	30-Jun-23	evw 175		MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	1	100				S	
Chris Pepper	30-Jun-23	evw 175		AMRO	American Robin	<i>Turdus migratorius</i>	1	100				S	
Chris Pepper	30-Jun-23	evw 175		SWTH	Swainson's Thrush	<i>Catharus ustulatus</i>	1	100				S	
Chris Pepper	30-Jun-23	evw 175		COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	2	100				S	
Chris Pepper	30-Jun-23	evw 175		SWSP	Swamp Sparrow	<i>Melospiza georgiana</i>	1	100				S	
Chris Pepper	30-Jun-23	evw 175		AMRE	American Redstart	<i>Setophaga ruticilla</i>	3	0				S	
Chris Pepper	30-Jun-23	evw 175		BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1	100				S	
Chris Pepper	30-Jun-23	evw 175		YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1	0				H	
Chris Pepper	30-Jun-23	evw 175		BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1	0				S	
Chris Pepper	30-Jun-23	evw 173	7:12 AM	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	2	50				S	
Chris Pepper	30-Jun-23	evw 173		COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	2	0				S	
Chris Pepper	30-Jun-23	evw 173		NAWA	Nashville Warbler	<i>Leiothlypis ruficapilla</i>	1	0				S	
Chris Pepper	30-Jun-23	evw 173		WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	2	50				S	
Chris Pepper	30-Jun-23	evw 173		GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	2	0				S	
Chris Pepper	30-Jun-23	evw 173		HETH	Hermit Thrush	<i>Catharus guttatus</i>	1	100				S	
Chris Pepper	30-Jun-23	evw 173		LISP	Lincoln's Sparrow	<i>Melospiza lincolni</i>	1	50				S	
Chris Pepper	30-Jun-23	evw 173		YBFL	Yellow-bellied Flycatcher	<i>Empidonax flaviventris</i>	2	50				S	
Chris Pepper	30-Jun-23	evw 173		YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1	0				S	
Chris Pepper	30-Jun-23	evw 173		PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1	50				S	
Chris Pepper	30-Jun-23	evw 173		ALFL	Alder Flycatcher	<i>Empidonax alnorum</i>	1	50				S	
Chris Pepper	30-Jun-23	evw 173		AMRE	American Redstart	<i>Setophaga ruticilla</i>	2	50				S	
Chris Pepper	30-Jun-23	evw 173		RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1	100	S			S	
Chris Pepper	30-Jun-23	evw 173		BBWA	Bay-breasted Warbler	<i>Setophaga castanea</i>	1	0	NE			S	
Chris Pepper	30-Jun-23	evw 173		BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1	100				S	
Chris Pepper	30-Jun-23	evw 173		AMCR	American Crow	<i>Corvus brachyrhynchos</i>	1	100				H	
Chris Pepper	30-Jun-23	evw 174	7:37 AM	NOFL	Northern Flicker	<i>Colaptes auratus</i>	1	0				H	
Chris Pepper	30-Jun-23	evw 174		HETH	Hermit Thrush	<i>Catharus guttatus</i>	2	0				S	
Chris Pepper	30-Jun-23	evw 174		GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	2	0				S	
Chris Pepper	30-Jun-23	evw 174		NAWA	Nashville Warbler	<i>Leiothlypis ruficapilla</i>	1	0				S	
Chris Pepper	30-Jun-23	evw 174		PAWA	Palm Warbler	<i>Setophaga palmarum</i>	2	0				S	
Chris Pepper	30-Jun-23	evw 174		SWTH	Swainson's Thrush	<i>Catharus ustulatus</i>	1	100				S	
Chris Pepper	30-Jun-23	evw 174		WIWR	Winter Wren	<i>Troglodytes hiemalis</i>	1	100				S	
Chris Pepper	30-Jun-23	evw 174		WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1	100				S	
Chris Pepper	30-Jun-23	evw 174		LISP	Lincoln's Sparrow	<i>Melospiza lincolni</i>	1	50				S	
Chris Pepper	30-Jun-23	evw 174		RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1	100	NE			S	
Chris Pepper	30-Jun-23	evw 174		PUFI	Purple Finch	<i>Haemorhous purpureus</i>	1	100				S	
Chris Pepper	30-Jun-23	evw 174		AMRO	American Robin	<i>Turdus migratorius</i>	1	100				S	
Chris Pepper	30-Jun-23	evw 174		YBFL	Yellow-bellied Flycatcher	<i>Empidonax flaviventris</i>	1	100				S	
Chris Pepper	30-Jun-23	evw 174		BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1	50				S	
Chris Pepper	30-Jun-23	evw 174		MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	1	0				S	
Chris Pepper	30-Jun-23	evw 169	7:55 AM	NAWA	Nashville Warbler	<i>Leiothlypis ruficapilla</i>	2	0				S	

Table 8: 2023 Breeding Bird Point Count Survey Results - Harbour Hills Wind Project

Project # 25-11682

Observer	Date	Survey Location	Survey Start Time	Species Code	Common Name	Scientific Name	#	Distance (m)	Bearing	Flyover Height (m)	Flight Direction	Breeding Evidence ¹	Comments
Chris Pepper	30-Jun-23	evw 169		MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	1	0				S	
Chris Pepper	30-Jun-23	evw 169		BBWA	Bay-breasted Warbler	<i>Setophaga castanea</i>	1	0	E			S	
Chris Pepper	30-Jun-23	evw 169		AMCR	American Crow	<i>Corvus brachyrhynchos</i>	1	250				X	
Chris Pepper	30-Jun-23	evw 169		WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	3	0				P	
Chris Pepper	30-Jun-23	evw 169		NOFL	Northern Flicker	<i>Colaptes auratus</i>	1	250				H	
Chris Pepper	30-Jun-23	evw 169		YBFL	Yellow-bellied Flycatcher	<i>Empidonax flaviventris</i>	1	50				S	
Chris Pepper	30-Jun-23	evw 169		YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1	50				S	
Chris Pepper	30-Jun-23	evw 169		WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1	100				S	
Chris Pepper	30-Jun-23	evw 169		SWTH	Swainson's Thrush	<i>Catharus ustulatus</i>	1	0				H	
Chris Pepper	30-Jun-23	evw 172	8:20 AM	YBFL	Yellow-bellied Flycatcher	<i>Empidonax flaviventris</i>	1	100				S	
Chris Pepper	30-Jun-23	evw 172		YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1	50				S	
Chris Pepper	30-Jun-23	evw 172		RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1	100	W			S	
Chris Pepper	30-Jun-23	evw 172		RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1	0	E			S	
Chris Pepper	30-Jun-23	evw 172		REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	1	50				S	
Chris Pepper	30-Jun-23	evw 172		WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1	0				S	
Chris Pepper	30-Jun-23	evw 172	i	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1	50				S	
Chris Pepper	30-Jun-23	evw 172		HETH	Hermit Thrush	<i>Catharus guttatus</i>	2	50				S	
Chris Pepper	30-Jun-23	evw 172		AMRE	American Redstart	<i>Setophaga ruticilla</i>	1	50				S	
Chris Pepper	30-Jun-23	evw 172		BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1	0				S	
Chris Pepper	30-Jun-23	evw 172		PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1	0				S	
Chris Pepper	30-Jun-23	evw 172		PWO	Pileated Woodpecker	<i>Dryocopus pileatus</i>	1	0				H	
Chris Pepper	30-Jun-23	evw 170	8:36 AM	HETH	Hermit Thrush	<i>Catharus guttatus</i>	2	50				S	
Chris Pepper	30-Jun-23	evw 170		GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	0				H	
Chris Pepper	30-Jun-23	evw 170		MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	1	0				S	
Chris Pepper	30-Jun-23	evw 170		YBFL	Yellow-bellied Flycatcher	<i>Empidonax flaviventris</i>	1	100				H	
Chris Pepper	30-Jun-23	evw 170		BBWA	Bay-breasted Warbler	<i>Setophaga castanea</i>	1	0	SW			S	
Chris Pepper	30-Jun-23	evw 170		WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1	100				S	
Chris Pepper	30-Jun-23	evw 170		BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1	50				S	
Chris Pepper	30-Jun-23	evw 171	8:52 AM	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	2	100				S	
Chris Pepper	30-Jun-23	evw 171		NAWA	Nashville Warbler	<i>Leiothlypis ruficapilla</i>	1	100				S	
Chris Pepper	30-Jun-23	evw 171		HETH	Hermit Thrush	<i>Catharus guttatus</i>	2	100				S	
Chris Pepper	30-Jun-23	evw 171		BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1	50				S	
Chris Pepper	30-Jun-23	evw 171		AMRE	American Redstart	<i>Setophaga ruticilla</i>	1	50				S	
Chris Pepper	30-Jun-23	evw 171		YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1	50				S	
Chris Pepper	30-Jun-23	evw 171		PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1	50				S	
Chris Pepper	30-Jun-23	evw 171		COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1	50				S	
Chris Pepper	30-Jun-23	evw 171		BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1	100				S	
Chris Pepper	30-Jun-23	evw 195	9:05 AM	ALFL	Alder Flycatcher	<i>Empidonax alnorum</i>	2	100				S	
Chris Pepper	30-Jun-23	evw 195		PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1	50				S	
Chris Pepper	30-Jun-23	evw 195		COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	2	50				S	
Chris Pepper	30-Jun-23	evw 195		HETH	Hermit Thrush	<i>Catharus guttatus</i>	1	100				S	
Chris Pepper	30-Jun-23	evw 195		YBFL	Yellow-bellied Flycatcher	<i>Empidonax flaviventris</i>	2	50				H	
Chris Pepper	30-Jun-23	evw 195		BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1	50				S	
Chris Pepper	30-Jun-23	evw 195		BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1	0				S	
Chris Pepper	30-Jun-23	evw 195		BCCH	Black-capped Chickadee	<i>Poecile atricapillus</i>	1	50				S	
Chris Pepper	30-Jun-23	evw 195		SWTH	Swainson's Thrush	<i>Catharus ustulatus</i>	1	100				S	
Chris Pepper	30-Jun-23	evw 195		GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	50				S	
Chris Pepper	30-Jun-23	evw 195		NAWA	Nashville Warbler	<i>Leiothlypis ruficapilla</i>	2	50				S	
Chris Pepper	30-Jun-23	evw 195		RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1	50	N			S	
Chris Pepper	30-Jun-23	evw 195		MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	1	0				S	
Chris Pepper	30-Jun-23	evw 195		WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1	100				S	
Chris Pepper	30-Jun-23	evw 195		BWHA	Broad-winged Hawk	<i>Buteo platypterus</i>	1	100				H	
Chris Pepper	30-Jun-23	evw 168	9:38 AM	SWTH	Swainson's Thrush	<i>Catharus ustulatus</i>	2	100				S	
Chris Pepper	30-Jun-23	evw 168		BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1	50				S	
Chris Pepper	30-Jun-23	evw 168		YBFL	Yellow-bellied Flycatcher	<i>Empidonax flaviventris</i>	1	50				S	
Chris Pepper	30-Jun-23	evw 168		ALFL	Alder Flycatcher	<i>Empidonax alnorum</i>	1	100				S	
Chris Pepper	30-Jun-23	evw 168		BWHA	Broad-winged Hawk	<i>Buteo platypterus</i>	1	N/A	Unknown			H	
Chris Pepper	30-Jun-23	evw 168		BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1	50				S	
Chris Pepper	30-Jun-23	evw 168		NAWA	Nashville Warbler	<i>Leiothlypis ruficapilla</i>	1	50				S	
Chris Pepper	30-Jun-23	evw 168		PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1	50				S	
Chris Pepper	30-Jun-23	evw 168		RUGR	Ruffed Grouse	<i>Bonasa umbellus</i>	1	50				S	
Chris Pepper	30-Jun-23	evw 168		COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1	50				S	
Chris Pepper	30-Jun-23	evw 168		MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	1	50				S	
Chris Pepper	30-Jun-23	evw 168		HETH	Hermit Thrush	<i>Catharus guttatus</i>	1	100				S	
Chris Pepper	30-Jun-23	evw 168		AMRE	American Redstart	<i>Setophaga ruticilla</i>	1	50				S	
Chris Pepper	30-Jun-23	evw 167	9:54 AM	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	50				S	
Chris Pepper	30-Jun-23	evw 167		BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	2	50				S	
Chris Pepper	30-Jun-23	evw 167		AMRE	American Redstart	<i>Setophaga ruticilla</i>	1	50				S	
Chris Pepper	30-Jun-23	evw 167		BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1	0				S	
Chris Pepper	30-Jun-23	evw 167		BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1	250				S	
Chris Pepper	30-Jun-23	evw 167		WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1	100				S	
Chris Pepper	30-Jun-23	evw 167		AMCR	American Crow	<i>Corvus brachyrhynchos</i>	1	500				X	
Chris Pepper	30-Jun-23	evw 167		MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	1	50				S	

Table 8: 2023 Breeding Bird Point Count Survey Results - Harbour Hills Wind Project

Observer	Date	Survey Location	Survey Start Time	Species Code	Common Name	Scientific Name	#	Distance (m)	Bearing	Flyover Height (m)	Flight Direction	Breeding Evidence ¹	Comments
Chris Pepper	30-Jun-23	evw 167	10:10 AM	REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	1	50				S	
Chris Pepper	30-Jun-23	evw 164		RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1	100	E			S	
Chris Pepper	30-Jun-23	evw 164		ALFL	Alder Flycatcher	<i>Empidonax alnorum</i>	2	50				S	
Chris Pepper	30-Jun-23	evw 164		WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	2	50				S	
Chris Pepper	30-Jun-23	evw 164		PAWA	Palm Warbler	<i>Setophaga palmarum</i>	2	50				S	
Chris Pepper	30-Jun-23	evw 164		MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	2	50				S	
Chris Pepper	30-Jun-23	evw 164		BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	2	0				A	
Chris Pepper	30-Jun-23	evw 164		YBFL	Yellow-bellied Flycatcher	<i>Empidonax flaviventris</i>	1	50				S	
Chris Pepper	30-Jun-23	evw 164		NAWA	Nashville Warbler	<i>Leiothlypis ruficapilla</i>	1	50				S	
Chris Pepper	30-Jun-23	evw 164		COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1	100				S	
Chris Pepper	30-Jun-23	evw 164		PUFI	Purple Finch	<i>Haemorhous purpureus</i>	1	50				H	
Chris Pepper	30-Jun-23	evw 164		BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1	50				S	
Chris Pepper	30-Jun-23	evw 164		AMGO	American Goldfinch	<i>Spinus tristis</i>	1	50				H	
Chris Pepper	30-Jun-23	evw 164		GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	50				S	
Chris Pepper	30-Jun-23	evw 164		SWTH	Swainson's Thrush	<i>Catharus ustulatus</i>	1	100				S	
Chris Pepper	30-Jun-23	evw 164		LEFL	Least Flycatcher	<i>Empidonax minimus</i>	1	50				S	
Chris Pepper	30-Jun-23	evw 164		AMRE	American Redstart	<i>Setophaga ruticilla</i>	1	50				S	
Chris Pepper	30-Jun-23	evw 164		HETH	Hermit Thrush	<i>Catharus guttatus</i>	1	100				S	
Chris Pepper	30-Jun-23	evw 164		AMCR	American Crow	<i>Corvus brachyrhynchos</i>	1	500				X	
Chris Pepper	30-Jun-23	evw 110	5:24 AM	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	1	100				H	
Chris Pepper	30-Jun-23	evw 110		HETH	Hermit Thrush	<i>Catharus guttatus</i>	2	100				S	
Chris Pepper	30-Jun-23	evw 110		YBFL	Yellow-bellied Flycatcher	<i>Empidonax flaviventris</i>	2	50				S	
Chris Pepper	30-Jun-23	evw 110		BLJA	Blue Jay	<i>Cyanocitta cristata</i>	1	100				H	
Chris Pepper	30-Jun-23	evw 110		BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1	50				S	
Chris Pepper	30-Jun-23	evw 110		NAWA	Nashville Warbler	<i>Leiothlypis ruficapilla</i>	1	50				S	
Chris Pepper	30-Jun-23	evw 110		PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1	50				S	
Chris Pepper	30-Jun-23	evw 110		BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1	100				S	
Chris Pepper	30-Jun-23	evw 110		GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	50				S	
Chris Pepper	30-Jun-23	evw 110		WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1	100				S	
Chris Pepper	30-Jun-23	evw 110		RECR	Red Crossbill	<i>Loxia curvirostra</i>	1	100	SE			H	
Chris Pepper	30-Jun-23	evw 110		YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1	50				H	
Chris Pepper	30-Jun-23	evw 110		BOCH	Boreal Chickadee	<i>Poecile hudsonicus</i>	2	0	W			H	
Chris Pepper	30-Jun-23	evw 110		MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	1	50				S	
Chris Pepper	30-Jun-23	evw 110		COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	2	50				S	
Chris Pepper	30-Jun-23	evw 110		SWTH	Swainson's Thrush	<i>Catharus ustulatus</i>	1	100				S	
Chris Pepper	30-Jun-23	evw 111		NAWA	Nashville Warbler	<i>Leiothlypis ruficapilla</i>	1	50				S	
Chris Pepper	30-Jun-23	evw 111		BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	2	50				S	
Chris Pepper	30-Jun-23	evw 111		REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	1	100				S	
Chris Pepper	30-Jun-23	evw 111		YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1	50				S	
Chris Pepper	30-Jun-23	evw 111		PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1	50				S	
Chris Pepper	30-Jun-23	evw 111		WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	2	100				S	
Chris Pepper	30-Jun-23	evw 111		HETH	Hermit Thrush	<i>Catharus guttatus</i>	1	100				S	
Chris Pepper	30-Jun-23	evw 111		YBFL	Yellow-bellied Flycatcher	<i>Empidonax flaviventris</i>	1	100				S	
Chris Pepper	30-Jun-23	evw 111		COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	2	50				S	
Chris Pepper	30-Jun-23	evw 111		RECR	Red Crossbill	<i>Loxia curvirostra</i>	1	100	E			H	
Chris Pepper	30-Jun-23	evw 111		MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	2	50				S	
Chris Pepper	30-Jun-23	evw 111		MOWA	Mourning Warbler	<i>Geothlypis philadelphia</i>	1	100				S	
Chris Pepper	30-Jun-23	evw 111		COGR	Common Grackle	<i>Quiscalus quiscula</i>	1	100	SE	50	N	Flying	
Chris Pepper	30-Jun-23	evw 111		BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1	50				S	
Chris Pepper	30-Jun-23	evw 111		NOFL	Northern Flicker	<i>Colaptes auratus</i>	1	100				H	
Chris Pepper	30-Jun-23	evw 111		CAWA	Canada Warbler	<i>Cardellina canadensis</i>	1	50	E			S	Only sang once, paired?
Chris Pepper	30-Jun-23	evw 112	5:59 AM	SWTH	Swainson's Thrush	<i>Catharus ustulatus</i>	1	100				S	
Chris Pepper	30-Jun-23	evw 112		MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	1	50				S	
Chris Pepper	30-Jun-23	evw 112		WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	2	100				S	
Chris Pepper	30-Jun-23	evw 112		PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1	50				S	
Chris Pepper	30-Jun-23	evw 112		HETH	Hermit Thrush	<i>Catharus guttatus</i>	2	50				S	
Chris Pepper	30-Jun-23	evw 112		OSFL	Olive-sided Flycatcher	<i>Contopus cooperi</i>	1	250	S			S	
Chris Pepper	30-Jun-23	evw 112		AMRO	American Robin	<i>Turdus migratorius</i>	1	100				H	
Chris Pepper	30-Jun-23	evw 112		WWCR	White-winged Crossbill	<i>Loxia leucoptera</i>	2	50	S			S	
Chris Pepper	30-Jun-23	evw 112		RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1	100	SW			S	
Chris Pepper	30-Jun-23	evw 112		BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1	100				S	
Chris Pepper	30-Jun-23	evw 112		YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1	50				S	
Chris Pepper	30-Jun-23	evw 112		BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1	50				S	
Chris Pepper	30-Jun-23	evw 112		GRYE	Greater Yellowlegs	<i>Tringa melanoleuca</i>	1	500	SE			H	
Chris Pepper	30-Jun-23	evw 112		SWSP	Swamp Sparrow	<i>Melospiza georgiana</i>	1	100				S	
Chris Pepper	30-Jun-23	evw 112		RBNU	Red-breasted Nuthatch	<i>Sitta canadensis</i>	1	50	S			H	
Chris Pepper	30-Jun-23	evw 112		AMRE	American Redstart	<i>Setophaga ruticilla</i>	1	100				S	
Chris Pepper	30-Jun-23	evw 112		YBFL	Yellow-bellied Flycatcher	<i>Empidonax flaviventris</i>	1	100				S	
Chris Pepper	30-Jun-23	evw 112		BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1	100				S	
Chris Pepper	30-Jun-23	evw 116	6:20 AM	FOSP	Fox Sparrow	<i>Passerella iliaca</i>	1	100	SE			S	
Chris Pepper	30-Jun-23	evw 116		WIWR	Winter Wren	<i>Troglodytes hiemalis</i>	1	100				S	
Chris Pepper	30-Jun-23	evw 116		HETH	Hermit Thrush	<i>Catharus guttatus</i>	1	100				S	

Table 8: 2023 Breeding Bird Point Count Survey Results - Harbour Hills Wind Project

Observer	Date	Survey Location	Survey Start Time	Species Code	Common Name	Scientific Name	#	Distance (m)	Bearing	Flyover Height (m)	Flight Direction	Breeding Evidence ¹	Comments
Chris Pepper	30-Jun-23	evw 116		SWTH	Swainson's Thrush	<i>Catharus ustulatus</i>	3	50				S	
Chris Pepper	30-Jun-23	evw 116		AMRE	American Redstart	<i>Setophaga ruticilla</i>	2	0				S	
Chris Pepper	30-Jun-23	evw 116		MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	2	50				S	
Chris Pepper	30-Jun-23	evw 116		AMGO	American Goldfinch	<i>Spinus tristis</i>	1	100				H	
Chris Pepper	30-Jun-23	evw 116		BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	2	0				S	
Chris Pepper	30-Jun-23	evw 116		WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1	100				S	
Chris Pepper	30-Jun-23	evw 116		REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	1	100				S	
Chris Pepper	30-Jun-23	evw 116		YBFL	Yellow-bellied Flycatcher	<i>Empidonax flaviventris</i>	1	100				S	
Chris Pepper	30-Jun-23	evw 116		MOWA	Mourning Warbler	<i>Geothlypis philadelphia</i>	1	0				A	
Chris Pepper	30-Jun-23	evw 116		COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1	100				S	
Chris Pepper	30-Jun-23	evw 116		YBSA	Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>	1	100				H	
Chris Pepper	30-Jun-23	evw 116		YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1	100				S	
Chris Pepper	30-Jun-23	evw 190	6:36 AM	BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1	50				S	
Chris Pepper	30-Jun-23	evw 190		PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1	50				S	
Chris Pepper	30-Jun-23	evw 190		HETH	Hermit Thrush	<i>Catharus guttatus</i>	2	100				S	
Chris Pepper	30-Jun-23	evw 190		WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1	100				S	
Chris Pepper	30-Jun-23	evw 190		MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	1	50				S	
Chris Pepper	30-Jun-23	evw 190		REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	1	100				S	
Chris Pepper	30-Jun-23	evw 190		COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	2	50				S	
Chris Pepper	30-Jun-23	evw 190		DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1	100				S	
Chris Pepper	30-Jun-23	evw 190		BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	2	0				S	
Chris Pepper	30-Jun-23	evw 190		BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1	50				S	
Chris Pepper	30-Jun-23	evw 190		AMRE	American Redstart	<i>Setophaga ruticilla</i>	1	50				S	
Chris Pepper	30-Jun-23	evw 190		NOFL	Northern Flicker	<i>Colaptes auratus</i>	1	100				S	
Chris Pepper	30-Jun-23	evw 190		BCCH	Black-capped Chickadee	<i>Poecile atricapillus</i>	2	0				S	
Chris Pepper	30-Jun-23	evw 190		WWCR	White-winged Crossbill	<i>Loxia leucoptera</i>	1	100				H	
Chris Pepper	30-Jun-23	evw 115	6:49 AM	NAWA	Nashville Warbler	<i>Leiothlypis ruficapilla</i>	1	100				S	
Chris Pepper	30-Jun-23	evw 115		YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1	0				S	
Chris Pepper	30-Jun-23	evw 115		MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	2	50				S	
Chris Pepper	30-Jun-23	evw 115		COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	2	50				S	
Chris Pepper	30-Jun-23	evw 115		BOCH	Boreal Chickadee	<i>Poecile hudsonicus</i>	1	50	N			H	
Chris Pepper	30-Jun-23	evw 115		WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	2	100				S	
Chris Pepper	30-Jun-23	evw 115		CAJA	Canada Jay	<i>Perisoreus canadensis</i>	1	100	W			H	
Chris Pepper	30-Jun-23	evw 115		PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1	100				S	
Chris Pepper	30-Jun-23	evw 115		HETH	Hermit Thrush	<i>Catharus guttatus</i>	1	100				S	
Chris Pepper	30-Jun-23	evw 115		WWCR	White-winged Crossbill	<i>Loxia leucoptera</i>	1	100	W			H	
Chris Pepper	30-Jun-23	evw 114	7:04 AM	AMKE	American Kestrel	<i>Falco sparverius</i>	1	250	W			H	Hard to hear birds over flies at every point
Chris Pepper	30-Jun-23	evw 114		YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1	50				S	
Chris Pepper	30-Jun-23	evw 114		HETH	Hermit Thrush	<i>Catharus guttatus</i>	1	100				S	
Chris Pepper	30-Jun-23	evw 114		MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	2	0				S	
Chris Pepper	30-Jun-23	evw 114		ALFL	Alder Flycatcher	<i>Empidonax alnorum</i>	1	50				H	
Chris Pepper	30-Jun-23	evw 114		NAWA	Nashville Warbler	<i>Leiothlypis ruficapilla</i>	1	50				S	
Chris Pepper	30-Jun-23	evw 114		WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1	100				S	
Chris Pepper	30-Jun-23	evw 114		NOFL	Northern Flicker	<i>Colaptes auratus</i>	1	100				S	
Chris Pepper	30-Jun-23	evw 114		YBFL	Yellow-bellied Flycatcher	<i>Empidonax flaviventris</i>	1	100				S	
Chris Pepper	30-Jun-23	evw 114		COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	2	50				S	
Chris Pepper	30-Jun-23	evw 114		AMRO	American Robin	<i>Turdus migratorius</i>	1	100				S	
Chris Pepper	30-Jun-23	evw 114		BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1	50				S	
Chris Pepper	30-Jun-23	evw 114		CAWA	Canada Warbler	<i>Cardellina canadensis</i>	1	100	SW			S	
Chris Pepper	30-Jun-23	evw 114		PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1	100				S	
Chris Pepper	30-Jun-23	evw 114		BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1	100				S	
Chris Pepper	30-Jun-23	evw 114		SWTH	Swainson's Thrush	<i>Catharus ustulatus</i>	1	100					
Chris Pepper	30-Jun-23	evw 114		AMGO	American Goldfinch	<i>Spinus tristis</i>	1	100				H	
Chris Pepper	30-Jun-23	evw 113	7:17 AM	WWCR	White-winged Crossbill	<i>Loxia leucoptera</i>	1	50				Flying	
Chris Pepper	30-Jun-23	evw 113		PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1	50				S	
Chris Pepper	30-Jun-23	evw 113		NAWA	Nashville Warbler	<i>Leiothlypis ruficapilla</i>	1	50				S	
Chris Pepper	30-Jun-23	evw 113		HETH	Hermit Thrush	<i>Catharus guttatus</i>	1	100				S	
Chris Pepper	30-Jun-23	evw 113		GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	50				S	
Chris Pepper	30-Jun-23	evw 113		YBFL	Yellow-bellied Flycatcher	<i>Empidonax flaviventris</i>	1	100				S	
Chris Pepper	30-Jun-23	evw 113		MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	2	100				S	
Chris Pepper	30-Jun-23	evw 113		YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1	0				S	
Chris Pepper	30-Jun-23	evw 119	7:34 AM	MOWA	Mourning Warbler	<i>Geothlypis philadelphia</i>	1	0				A	
Chris Pepper	30-Jun-23	evw 119		CAWA	Canada Warbler	<i>Cardellina canadensis</i>	1	0	S			S	Countersinging on either side of road
Chris Pepper	30-Jun-23	evw 119		CAWA	Canada Warbler	<i>Cardellina canadensis</i>	1	100	N			S	
Chris Pepper	30-Jun-23	evw 119		COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1	50				S	
Chris Pepper	30-Jun-23	evw 119		BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1	0				S	
Chris Pepper	30-Jun-23	evw 119		BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1	0				H	
Chris Pepper	30-Jun-23	evw 119		BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1	50				S	
Chris Pepper	30-Jun-23	evw 119		BLJA	Blue Jay	<i>Cyanocitta cristata</i>	2	100				H	
Chris Pepper	30-Jun-23	evw 119		MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	1	50				S	
Chris Pepper	30-Jun-23	evw 119		COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1	50				S	

Table 8: 2023 Breeding Bird Point Count Survey Results - Harbour Hills Wind Project

Observer	Date	Survey Location	Survey Start Time	Species Code	Common Name	Scientific Name	#	Distance (m)	Bearing	Flyover Height (m)	Flight Direction	Breeding Evidence ¹	Comments
Chris Pepper	30-Jun-23	evw 119		WWCR	White-winged Crossbill	<i>Loxia leucoptera</i>	1	50				S	
Chris Pepper	30-Jun-23	evw 119		WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	2	100				S	
Chris Pepper	30-Jun-23	evw 119		GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	50				S	
Chris Pepper	30-Jun-23	evw 119		RUGR	Ruffed Grouse	<i>Bonasa umbellus</i>	1	N/A	Unknown			FY	
Chris Pepper	30-Jun-23	evw 119		YBSA	Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>	1	100				H	
Chris Pepper	30-Jun-23	evw 120	7:48 AM	OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	2	100				S	
Chris Pepper	30-Jun-23	evw 120		WIWR	Winter Wren	<i>Troglodytes hiemalis</i>	1	100				S	
Chris Pepper	30-Jun-23	evw 120		REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	1	100				S	
Chris Pepper	30-Jun-23	evw 120		BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1	0				S	
Chris Pepper	30-Jun-23	evw 120		NAWA	Nashville Warbler	<i>Leiothlypis ruficapilla</i>	1	100				S	
Chris Pepper	30-Jun-23	evw 120		WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	2	100				S	
Chris Pepper	30-Jun-23	evw 120		BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1	50				S	
Chris Pepper	30-Jun-23	evw 120		BLJA	Blue Jay	<i>Cyanocitta cristata</i>	1	100				H	
Chris Pepper	30-Jun-23	evw 120		NOPA	Northern Parula	<i>Setophaga americana</i>	1	100				S	
Chris Pepper	30-Jun-23	evw 120		BOCH	Boreal Chickadee	<i>Poecile hudsonicus</i>	1	100	W			H	
Chris Pepper	30-Jun-23	evw 120		NOFL	Northern Flicker	<i>Colaptes auratus</i>	1	100				H	
Chris Pepper	30-Jun-23	evw 120		HETH	Hermit Thrush	<i>Catharus guttatus</i>	1	100				S	
Chris Pepper	30-Jun-23	evw 120		WWCR	White-winged Crossbill	<i>Loxia leucoptera</i>	1	100				H	
Chris Pepper	30-Jun-23	evw 120		COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1	100				S	
Chris Pepper	30-Jun-23	evw 122	8:02 AM	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	1	100				S	
Chris Pepper	30-Jun-23	evw 122		NOFL	Northern Flicker	<i>Colaptes auratus</i>	1	100				H	
Chris Pepper	30-Jun-23	evw 122		DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1	50				S	
Chris Pepper	30-Jun-23	evw 122		WWCR	White-winged Crossbill	<i>Loxia leucoptera</i>	1	100				H	
Chris Pepper	30-Jun-23	evw 122		HETH	Hermit Thrush	<i>Catharus guttatus</i>	1	100				S	
Chris Pepper	30-Jun-23	evw 122		REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	1	100				S	
Chris Pepper	30-Jun-23	evw 122		SWTH	Swainson's Thrush	<i>Catharus ustulatus</i>	1	100				S	
Chris Pepper	30-Jun-23	evw 122		OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	1	50				S	
Chris Pepper	30-Jun-23	evw 121	8:22 AM	LEFL	Least Flycatcher	<i>Empidonax minimus</i>	2	0				S	
Chris Pepper	30-Jun-23	evw 121		REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	2	0				S	
Chris Pepper	30-Jun-23	evw 121		OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	2	50				S	
Chris Pepper	30-Jun-23	evw 121		BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	2	50				S	
Chris Pepper	30-Jun-23	evw 121		HETH	Hermit Thrush	<i>Catharus guttatus</i>	1	100				S	
Chris Pepper	30-Jun-23	evw 121		YBSA	Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>	1	50				H	
Chris Pepper	30-Jun-23	evw 125	8:50 AM	PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1	50				S	
Chris Pepper	30-Jun-23	evw 125		MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	1	50				S	
Chris Pepper	30-Jun-23	evw 125		BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1	0				S	
Chris Pepper	30-Jun-23	evw 125		COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1	0				A	
Chris Pepper	30-Jun-23	evw 125		YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1	0				S	
Chris Pepper	30-Jun-23	evw 125		HETH	Hermit Thrush	<i>Catharus guttatus</i>	1	100				S	
Chris Pepper	30-Jun-23	evw 125		WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1	100				S	
Chris Pepper	30-Jun-23	evw 125		REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	1	100				S	
Chris Pepper	30-Jun-23	evw 125		YBFL	Yellow-bellied Flycatcher	<i>Empidonax flaviventris</i>	1	100				S	
Chris Pepper	30-Jun-23	evw 125		CAWA	Canada Warbler	<i>Cardellina canadensis</i>	1	0	N			S	Silent for 8 mins, responded to recordings. Likely paired
Chris Pepper	30-Jun-23	evw 125		CAWA	Canada Warbler	<i>Cardellina canadensis</i>	1	50	W			S	
Chris Pepper	30-Jun-23	evw 125		WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1	100				S	
Chris Pepper	30-Jun-23	evw 126	9:08 AM	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	2	50				S	
Chris Pepper	30-Jun-23	evw 126		BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1	50				S	
Chris Pepper	30-Jun-23	evw 126		HETH	Hermit Thrush	<i>Catharus guttatus</i>	1	100				S	
Chris Pepper	30-Jun-23	evw 126		BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	2	0				S	
Chris Pepper	30-Jun-23	evw 126		COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1	100				S	
Chris Pepper	30-Jun-23	evw 126		PUFI	Purple Finch	<i>Haemorhous purpureus</i>	1	100				S	
Chris Pepper	30-Jun-23	evw 126		PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1	50				S	
Chris Pepper	30-Jun-23	evw 126		DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1	50				S	
Chris Pepper	30-Jun-23	evw 126		RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1	100	SW			S	
Chris Pepper	30-Jun-23	evw 126		WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	2	0				S	
Chris Pepper	30-Jun-23	evw 126		AMRE	American Redstart	<i>Setophaga ruticilla</i>	1	50				S	
Chris Pepper	30-Jun-23	evw 126		YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1	50				S	
Chris Pepper	30-Jun-23	evw 126		BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1	50				S	
Chris Pepper	30-Jun-23	evw 128	9:25 AM	WWCR	White-winged Crossbill	<i>Loxia leucoptera</i>	1	100				S	
Chris Pepper	30-Jun-23	evw 128		BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1	50				S	
Chris Pepper	30-Jun-23	evw 128		COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	2	0				S	
Chris Pepper	30-Jun-23	evw 128		BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1	50				S	
Chris Pepper	30-Jun-23	evw 128		NOFL	Northern Flicker	<i>Colaptes auratus</i>	1	100				H	
Chris Pepper	30-Jun-23	evw 128		MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	1	100				S	
Chris Pepper	30-Jun-23	evw 128		PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1	50				S	
Chris Pepper	30-Jun-23	evw 128		MOWA	Mourning Warbler	<i>Geothlypis philadelphia</i>	1	50				S	
Chris Pepper	30-Jun-23	evw 128		PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1	50				S	
Chris Pepper	30-Jun-23	evw 128		WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1	50				S	
Chris Pepper	30-Jun-23	evw 128		AMRE	American Redstart	<i>Setophaga ruticilla</i>	1	50				S	
Chris Pepper	30-Jun-23	evw 127	9:40 AM	LEFL	Least Flycatcher	<i>Empidonax minimus</i>	2	0				S	
Chris Pepper	30-Jun-23	evw 127		MOWA	Mourning Warbler	<i>Geothlypis philadelphia</i>	1	0				S	
Chris Pepper	30-Jun-23	evw 127		BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1	50				S	

Table 8: 2023 Breeding Bird Point Count Survey Results - Harbour Hills Wind Project

Project # 25-11682

Observer	Date	Survey Location	Survey Start Time	Species Code	Common Name	Scientific Name	#	Distance (m)	Bearing	Flyover Height (m)	Flight Direction	Breeding Evidence ¹	Comments
Chris Pepper	30-Jun-23	evw 127		OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	2	50				S	
Chris Pepper	30-Jun-23	evw 127		YBSA	Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>	1	100				S	
Chris Pepper	30-Jun-23	evw 127		BCCH	Black-capped Chickadee	<i>Poecile atricapillus</i>	2	0				S	
Chris Pepper	30-Jun-23	evw 127		DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1	100				S	
Chris Pepper	30-Jun-23	evw 127		HETH	Hermit Thrush	<i>Catharus guttatus</i>	1	100				S	
Chris Pepper	30-Jun-23	evw 127		REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	1	100				S	
Chris Pepper	30-Jun-23	evw 124	9:55 AM	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1	100				S	
Chris Pepper	30-Jun-23	evw 124		NOFL	Northern Flicker	<i>Colaptes auratus</i>	1	100				S	
Chris Pepper	30-Jun-23	evw 124		BOCH	Boreal Chickadee	<i>Poecile hudsonicus</i>	1	50	W			H	
Chris Pepper	30-Jun-23	evw 124		COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1	100				S	
Chris Pepper	30-Jun-23	evw 124		MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	2	100				S	
Chris Pepper	30-Jun-23	evw 124		REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	2	100				S	
Chris Pepper	30-Jun-23	evw 124		BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1	100				S	
Chris Pepper	30-Jun-23	evw 124		BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1	100				S	
Chris Pepper	30-Jun-23	evw 124		OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	2	100				S	
Chris Pepper	30-Jun-23	evw 124		DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1	50				S	
Chris Pepper	30-Jun-23	evw 123	10:07 AM	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1	50				S	
Chris Pepper	30-Jun-23	evw 123		OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	1	100				S	
Chris Pepper	30-Jun-23	evw 123		BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1	50				S	
Chris Pepper	30-Jun-23	evw 123		AMRO	American Robin	<i>Turdus migratorius</i>	1	100				H	
Chris Pepper	30-Jun-23	evw 123		BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1	100				S	
Chris Pepper	30-Jun-23	evw 123		BCCH	Black-capped Chickadee	<i>Poecile atricapillus</i>	1	100				S	
Chris Pepper	30-Jun-23	evw 123		CAWA	Canada Warbler	<i>Cardellina canadensis</i>	1	0	N			A	
Chris Pepper	3-Jul-23	Evw 214	5:32 AM	BTBW	Black-throated Blue Warbler	<i>Setophaga caerulescens</i>	1	0				S	
Chris Pepper	3-Jul-23	Evw 214		BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	2	0				S	
Chris Pepper	3-Jul-23	Evw 214		BLBW	Blackburnian Warbler	<i>Setophaga fusca</i>	1	0	N			S	
Chris Pepper	3-Jul-23	Evw 214		BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	2	0				S	
Chris Pepper	3-Jul-23	Evw 214		HETH	Hermit Thrush	<i>Catharus guttatus</i>	1	50				S	
Chris Pepper	3-Jul-23	Evw 214		AMCR	American Crow	<i>Corvus brachyrhynchos</i>	3	250				H	
Chris Pepper	3-Jul-23	Evw 214		DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1	50				S	
Chris Pepper	3-Jul-23	Evw 214		WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	2	50				S	
Chris Pepper	3-Jul-23	Evw 214		OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	2	50				S	
Chris Pepper	3-Jul-23	Evw 214		WIWR	Winter Wren	<i>Troglodytes hiemalis</i>	1	100				S	
Chris Pepper	3-Jul-23	Evw 163	5:58 AM	NAWA	Nashville Warbler	<i>Leiothlypis ruficapilla</i>	1	50				S	
Chris Pepper	3-Jul-23	Evw 163		MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	2	0				S	
Chris Pepper	3-Jul-23	Evw 163		CAWA	Canada Warbler	<i>Cardellina canadensis</i>	2	50	NW			S	
Chris Pepper	3-Jul-23	Evw 163		DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1	0				C	
Chris Pepper	3-Jul-23	Evw 163		PAWA	Palm Warbler	<i>Setophaga palmarum</i>	2	0				S	
Chris Pepper	3-Jul-23	Evw 163		COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	2	0				S	
Chris Pepper	3-Jul-23	Evw 163		ALFL	Alder Flycatcher	<i>Empidonax alnorum</i>	1	50				S	
Chris Pepper	3-Jul-23	Evw 163		WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	2	50				S	
Chris Pepper	3-Jul-23	Evw 163		YBFL	Yellow-bellied Flycatcher	<i>Empidonax flaviventris</i>	2	50				H	
Chris Pepper	3-Jul-23	Evw 163		SWTH	Swainson's Thrush	<i>Catharus ustulatus</i>	1	100				S	
Chris Pepper	3-Jul-23	Evw 163		HETH	Hermit Thrush	<i>Catharus guttatus</i>	1	50				H	
Chris Pepper	3-Jul-23	Evw 162	6:12 AM	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	2	50				S	
Chris Pepper	3-Jul-23	Evw 162		MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	2	0				S	
Chris Pepper	3-Jul-23	Evw 162		AMRE	American Redstart	<i>Setophaga ruticilla</i>	1	50				S	
Chris Pepper	3-Jul-23	Evw 162		RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1	50	NW			S	
Chris Pepper	3-Jul-23	Evw 162		ALFL	Alder Flycatcher	<i>Empidonax alnorum</i>	2	0				S	
Chris Pepper	3-Jul-23	Evw 162		SWSP	Swamp Sparrow	<i>Melospiza georgiana</i>	1	50				S	
Chris Pepper	3-Jul-23	Evw 162		WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	2	100				S	
Chris Pepper	3-Jul-23	Evw 162		BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1	0				S	
Chris Pepper	3-Jul-23	Evw 162		HETH	Hermit Thrush	<i>Catharus guttatus</i>	1	0				H	
Chris Pepper	3-Jul-23	Evw 161	6:26 AM	HAWO	Hairy Woodpecker	<i>Dryobates villosus</i>	1	100				H	
Chris Pepper	3-Jul-23	Evw 161		SWTH	Swainson's Thrush	<i>Catharus ustulatus</i>	1	50				S	
Chris Pepper	3-Jul-23	Evw 161		MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	2	0				S	
Chris Pepper	3-Jul-23	Evw 161		COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1	50				S	
Chris Pepper	3-Jul-23	Evw 161		AMRE	American Redstart	<i>Setophaga ruticilla</i>	1	0				S	
Chris Pepper	3-Jul-23	Evw 161		WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	2	50				S	
Chris Pepper	3-Jul-23	Evw 161		HETH	Hermit Thrush	<i>Catharus guttatus</i>	1	50				H	
Chris Pepper	3-Jul-23	Evw 161		BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1	0				S	
Chris Pepper	3-Jul-23	Evw 161		BCCH	Black-capped Chickadee	<i>Poecile atricapillus</i>	2	50				S	
Chris Pepper	3-Jul-23	Evw 161		RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1	100	SW			S	
Chris Pepper	3-Jul-23	Evw 161		CAJA	Canada Jay	<i>Perisoreus canadensis</i>	2	50	N			H	
Chris Pepper	3-Jul-23	Evw 160	6:41 AM	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	0				S	
Chris Pepper	3-Jul-23	Evw 160		BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1	0				S	
Chris Pepper	3-Jul-23	Evw 160		PIWO	Pileated Woodpecker	<i>Dryocopus pileatus</i>	1	100				H	
Chris Pepper	3-Jul-23	Evw 160		SWTH	Swainson's Thrush	<i>Catharus ustulatus</i>	1	50				S	
Chris Pepper	3-Jul-23	Evw 160		OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	2	100				S	
Chris Pepper	3-Jul-23	Evw 160		COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	2	50				S	
Chris Pepper	3-Jul-23	Evw 160		WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1	50				S	
Chris Pepper	3-Jul-23	Evw 160		BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1	0				S	
Chris Pepper	3-Jul-23	Evw 160		AMRO	American Robin	<i>Turdus migratorius</i>	1	100				S	

Table 8: 2023 Breeding Bird Point Count Survey Results - Harbour Hills Wind Project

Observer	Date	Survey Location	Survey Start Time	Species Code	Common Name	Scientific Name	#	Distance (m)	Bearing	Flyover Height (m)	Flight Direction	Breeding Evidence ¹	Comments
Chris Pepper	3-Jul-23	Eww 160		BBWA	Bay-breasted Warbler	<i>Setophaga castanea</i>	1	0	S			S	
Chris Pepper	3-Jul-23	Eww 159	6:56 AM	RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1	100	SE			S	
Chris Pepper	3-Jul-23	Eww 159		HAWO	Hairy Woodpecker	<i>Dryobates villosus</i>	1	50				H	
Chris Pepper	3-Jul-23	Eww 159		WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	2	0				S	
Chris Pepper	3-Jul-23	Eww 159		BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1	50				S	
Chris Pepper	3-Jul-23	Eww 159		YBFL	Yellow-bellied Flycatcher	<i>Empidonax flaviventris</i>	2	0				H	
Chris Pepper	3-Jul-23	Eww 159		YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	2	0				S	
Chris Pepper	3-Jul-23	Eww 159		ALFL	Alder Flycatcher	<i>Empidonax alnorum</i>	1	50				S	
Chris Pepper	3-Jul-23	Eww 159		MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	3	50				S	
Chris Pepper	3-Jul-23	Eww 159		BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1	0				S	
Chris Pepper	3-Jul-23	Eww 159		DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1	0				S	
Chris Pepper	3-Jul-23	Eww 159		AMCR	American Crow	<i>Corvus brachyrhynchos</i>	2	100				X	
Chris Pepper	3-Jul-23	Eww 158	7:12 AM	WIWR	Winter Wren	<i>Troglodytes hiemalis</i>	1	50				S	
Chris Pepper	3-Jul-23	Eww 158		MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	2	50				S	
Chris Pepper	3-Jul-23	Eww 158		WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	3	0				S	
Chris Pepper	3-Jul-23	Eww 158		AMCR	American Crow	<i>Corvus brachyrhynchos</i>	2	250				X	
Chris Pepper	3-Jul-23	Eww 158		AMRE	American Redstart	<i>Setophaga ruticilla</i>	1	0				S	
Chris Pepper	3-Jul-23	Eww 158		BTBW	Black-throated Blue Warbler	<i>Setophaga caerulescens</i>	1	0				S	
Chris Pepper	3-Jul-23	Eww 158		BBWA	Bay-breasted Warbler	<i>Setophaga castanea</i>	1	0	SW			S	
Chris Pepper	3-Jul-23	Eww 158		BLJA	Blue Jay	<i>Cyanocitta cristata</i>	2	100				H	
Chris Pepper	3-Jul-23	Eww 158		OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	2	100				S	
Chris Pepper	3-Jul-23	Eww 158		GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	0				H	
Chris Pepper	3-Jul-23	Eww 154	7:29 AM	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	1	100				H	
Chris Pepper	3-Jul-23	Eww 154		BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	2	0				S	
Chris Pepper	3-Jul-23	Eww 154		WIWR	Winter Wren	<i>Troglodytes hiemalis</i>	1	50				S	
Chris Pepper	3-Jul-23	Eww 154		BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1	0				S	
Chris Pepper	3-Jul-23	Eww 154		BLBW	Blackburnian Warbler	<i>Setophaga fusca</i>	1	0				S	
Chris Pepper	3-Jul-23	Eww 154		COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	2	100				S	
Chris Pepper	3-Jul-23	Eww 154		BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1	0				S	
Chris Pepper	3-Jul-23	Eww 154		BAEA	Bald Eagle	<i>Haliaeetus leucocephalus</i>	1	50				X	
Chris Pepper	3-Jul-23	Eww 154		MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	2	0				S	
Chris Pepper	3-Jul-23	Eww 154		REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	1	0				S	
Chris Pepper	3-Jul-23	Eww 154		WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1	0				H	
Chris Pepper	3-Jul-23	Eww 155	7:37 AM	REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	1	50				S	
Chris Pepper	3-Jul-23	Eww 155		BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1	50				S	
Chris Pepper	3-Jul-23	Eww 155		WIWR	Winter Wren	<i>Troglodytes hiemalis</i>	1	100				S	
Chris Pepper	3-Jul-23	Eww 155		COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1	0				S	
Chris Pepper	3-Jul-23	Eww 155		WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1	100				S	
Chris Pepper	3-Jul-23	Eww 155		BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1	0				S	
Chris Pepper	3-Jul-23	Eww 155		AMRE	American Redstart	<i>Setophaga ruticilla</i>	1	0				S	
Chris Pepper	3-Jul-23	Eww 155		CAJA	Canada Jay	<i>Perisoreus canadensis</i>	4	0	W			FY	
Chris Pepper	3-Jul-23	Eww 156	7:58 AM	LISP	Lincoln's Sparrow	<i>Melospiza lincolni</i>	2	0				A	
Chris Pepper	3-Jul-23	Eww 156		BBWA	Bay-breasted Warbler	<i>Setophaga castanea</i>	1	50	SW			S	
Chris Pepper	3-Jul-23	Eww 156		PIWO	Pileated Woodpecker	<i>Dryocopus pileatus</i>	1	100				H	
Chris Pepper	3-Jul-23	Eww 156		NAWA	Nashville Warbler	<i>Leiothlypis ruficapilla</i>	1	50				S	
Chris Pepper	3-Jul-23	Eww 156		BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	2	50				S	
Chris Pepper	3-Jul-23	Eww 156		OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	1	250				S	
Chris Pepper	3-Jul-23	Eww 156		SWTH	Swainson's Thrush	<i>Catharus ustulatus</i>	1	100				S	
Chris Pepper	3-Jul-23	Eww 156		RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1	100	NW			S	
Chris Pepper	3-Jul-23	Eww 156		COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1	50				S	
Chris Pepper	3-Jul-23	Eww 156		WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1	100				S	
Chris Pepper	3-Jul-23	Eww 189	8:24 AM	ALFL	Alder Flycatcher	<i>Empidonax alnorum</i>	1	50				S	
Chris Pepper	3-Jul-23	Eww 189		PAWA	Palm Warbler	<i>Setophaga palmarum</i>	2	0				S	
Chris Pepper	3-Jul-23	Eww 189		YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1	50				S	
Chris Pepper	3-Jul-23	Eww 189		YBFL	Yellow-bellied Flycatcher	<i>Empidonax flaviventris</i>	1	0				S	
Chris Pepper	3-Jul-23	Eww 189		WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	2	100				S	
Chris Pepper	3-Jul-23	Eww 189		COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1	50				S	
Chris Pepper	3-Jul-23	Eww 189		AMRE	American Redstart	<i>Setophaga ruticilla</i>	1	50				S	
Chris Pepper	3-Jul-23	Eww 189		NAWA	Nashville Warbler	<i>Leiothlypis ruficapilla</i>	1	0				S	
Chris Pepper	3-Jul-23	Eww 189		BOCH	Boreal Chickadee	<i>Poecile hudsonicus</i>	2	50	S			H	
Chris Pepper	3-Jul-23	Eww 189		OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	1	100				S	
Chris Pepper	3-Jul-23	Eww 153	8:40 AM	AMRE	American Redstart	<i>Setophaga ruticilla</i>	1	50				S	
Chris Pepper	3-Jul-23	Eww 153		COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1	0				S	
Chris Pepper	3-Jul-23	Eww 153		BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1	0				S	
Chris Pepper	3-Jul-23	Eww 153		RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1	100	N			S	
Chris Pepper	3-Jul-23	Eww 153		YBFL	Yellow-bellied Flycatcher	<i>Empidonax flaviventris</i>	2	50				S	
Chris Pepper	3-Jul-23	Eww 153		PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1	0				S	
Chris Pepper	3-Jul-23	Eww 153		NAWA	Nashville Warbler	<i>Leiothlypis ruficapilla</i>	1	0				S	
Chris Pepper	3-Jul-23	Eww 153		WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	2	100				S	
Chris Pepper	3-Jul-23	Eww 153		MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	2	50				S	
Chris Pepper	3-Jul-23	Eww 196	8:56 AM	CAWA	Canada Warbler	<i>Cardellina canadensis</i>	1	50	SW			S	
Chris Pepper	3-Jul-23	Eww 196		PAWA	Palm Warbler	<i>Setophaga palmarum</i>	2	0				S	
Chris Pepper	3-Jul-23	Eww 196		CAJA	Canada Jay	<i>Perisoreus canadensis</i>	1	0	N			H	

Table 8: 2023 Breeding Bird Point Count Survey Results - Harbour Hills Wind Project

Observer	Date	Survey Location	Survey Start Time	Species Code	Common Name	Scientific Name	#	Distance (m)	Bearing	Flyover Height (m)	Flight Direction	Breeding Evidence ¹	Comments
Chris Pepper	3-Jul-23	Evw 196		YBFL	Yellow-bellied Flycatcher	<i>Empidonax flaviventris</i>	1	50				H	
Chris Pepper	3-Jul-23	Evw 196		RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1	100	W			S	
Chris Pepper	3-Jul-23	Evw 196		ALFL	Alder Flycatcher	<i>Empidonax alnorum</i>	1	50				H	
Chris Pepper	3-Jul-23	Evw 196		PUFI	Purple Finch	<i>Haemorhous purpureus</i>	1	100				S	
Chris Pepper	3-Jul-23	Evw 196		COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	2	0				S	
Chris Pepper	3-Jul-23	Evw 196		DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1	0				H	
Chris Pepper	3-Jul-23	Evw 196		WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	2	50				S	
Chris Pepper	3-Jul-23	Evw 157	9:11 AM	BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	2	50				S	
Chris Pepper	3-Jul-23	Evw 157		YBFL	Yellow-bellied Flycatcher	<i>Empidonax flaviventris</i>	1	50				H	
Chris Pepper	3-Jul-23	Evw 157		ALFL	Alder Flycatcher	<i>Empidonax alnorum</i>	1	50				S	
Chris Pepper	3-Jul-23	Evw 157		COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1	50				S	
Chris Pepper	3-Jul-23	Evw 157		WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1	100				S	
Chris Pepper	3-Jul-23	Evw 157		BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1	0				S	
Chris Pepper	3-Jul-23	Evw 157		WIWR	Winter Wren	<i>Troglodytes hiemalis</i>	1	100				S	

NOTES

¹ OBSERVED = X - Species observed in its breeding season (no breeding evidence)

POSSIBLE = H - Species observed in its breeding season in suitable nesting habitat; S - Singing male(s) present, or breeding calls heard, in suitable nesting habitat in breeding season

PROBABLE = P - Pair observed in suitable nesting habitat in nesting season; T - Permanent territory presumed through registration of territorial song, or the occurrence of an adult bird, at the same place, in breeding habitat, on at least two days a week or more apart, during its breeding season. Use discretion when using this code.

"T" is not to be used for colonial birds, or species that might forage or loaf a long distance from their nesting site e.g. Kingfisher, Turkey Vulture, and male waterfowl; D - Courtship or display, including interaction between a male and a female or two males, including courtship feeding or copulation; V - Visiting probable nest site;

A - Agitated behaviour or anxiety calls of an adult; B - Brood Patch on adult female or cloacal protuberance on adult male; N - Nest-building or excavation of nest hole by wrens and woodpeckers

CONFIRMED = NB - Nest building or carrying nest materials, for all species except wrens and woodpeckers; DD - Distraction display or injury feigning; NU - Used nest or egg shells found (occupied or laid within the period of the survey); FY - Recently fledged young (nidicolous species) or downy young (nidifugous species), including incapable of sustained flight; AE - Adult leaving or entering nest sites in circumstances indicating occupied nest; FS - Adult carying fecal sac; CF - Adult carying food for young; NE - Nest containing eggs; NY - Nest with young seen or heard

Table 9: 2023 Breeding Bird Point Count Survey Results Summary - Harbour Hills Wind Project

Project # 25-11682

Common name	Scientific Name	SARA Status	COSEWIC Status	ESA Status	NS S-Rank	Number Observed
Alder Flycatcher	<i>Empidonax alnorum</i>	-	-	-	S5B	62
American Crow	<i>Corvus brachyrhynchos</i>	-	-	-	S5	25
American Goldfinch	<i>Spinus tristis</i>	-	-	-	S5	6
American Kestrel	<i>Falco sparverius</i>	-	-	-	S3B,S4M	1
American Redstart	<i>Setophaga ruticilla</i>	-	-	-	S5B	91
American Robin	<i>Turdus migratorius</i>	-	-	-	S5B,S5N	27
Bald Eagle	<i>Haliaeetus leucocephalus</i>	-	Not at Risk	-	S5?	1
Barn Swallow	<i>Hirundo rustica</i>	Threatened	Special Concern	Endangered	S3B	2
Bay-breasted Warbler	<i>Setophaga castanea</i>	-	-	-	S4B	19
Belted Kingfisher	<i>Megaceryle alcyon</i>	-	-	-	S4B,SUN	1
Black-and-white Warbler	<i>Mniotilta varia</i>	-	-	-	S5B	107
Black-backed Woodpecker	<i>Picoides arcticus</i>	-	-	-	S3S4	2
Blackburnian Warbler	<i>Setophaga fusca</i>	-	-	-	S5B	7
Black-capped Chickadee	<i>Poecile atricapillus</i>	-	-	-	S5	25
Black-throated Blue Warbler	<i>Setophaga caerulescens</i>	-	-	-	S4B	4
Black-throated Green Warbler	<i>Setophaga virens</i>	-	-	-	S4B	114
Blue Jay	<i>Cyanocitta cristata</i>	-	-	-	S5	18
Blue-headed Vireo	<i>Vireo solitarius</i>	-	-	-	S5B	63
Boreal Chickadee	<i>Poecile hudsonicus</i>	-	-	-	S3	14
Broad-winged Hawk	<i>Buteo platypterus</i>	-	-	-	S5?B	2
Canada Jay	<i>Perisoreus canadensis</i>	-	-	-	S3	17
Canada Warbler	<i>Cardellina canadensis</i>	Threatened	Special Concern	Endangered	S2S3B	37
Cape May Warbler	<i>Setophaga tigrina</i>	-	-	-	S3S4B,S4M	1
Chestnut-sided Warbler	<i>Setophaga pensylvanica</i>	-	-	-	S5B	1
Common Grackle	<i>Quiscalus quiscula</i>	-	-	-	S5B,SUN	2
Common Loon	<i>Gavia immer</i>	-	Not at Risk	-	S4B,S4N	6
Common Merganser	<i>Mergus merganser</i>	-	-	-	S5B,S4N	1
Common Nighthawk	<i>Chordeiles minor</i>	Special Concern	Special Concern	Threatened	S3S4B	1
Common Raven	<i>Corvus corax</i>	-	-	-	S4	3

Table 9: 2023 Breeding Bird Point Count Survey Results Summary - Harbour Hills Wind Project

Project # 25-11682

Common name	Scientific Name	SARA Status	COSEWIC Status	ESA Status	NS S-Rank	Number Observed
Common Tern	<i>Sterna hirundo</i>	-	Not at Risk	-	S3B	3
Common Yellowthroat	<i>Geothlypis trichas</i>	-	-	-	S5B	155
Dark-eyed Junco	<i>Junco hyemalis</i>	-	-	-	S5	41
Downy Woodpecker	<i>Dryobates pubescens</i>	-	-	-	S5	2
Fox Sparrow	<i>Passerella iliaca</i>	-	-	-	S3B,S4M	3
Golden-crowned Kinglet	<i>Regulus satrapa</i>	-	-	-	S5	44
Great horned Owl	<i>Bubo virginianus</i>	-	-	-	S4	2
Greater Yellowlegs	<i>Tringa melanoleuca</i>	-	-	-	S3B,S4M	11
Green-winged Teal	<i>Anas crecca</i>	-	-	-	S4B	2
Hairy Woodpecker	<i>Dryobates villosus</i>	-	-	-	S5	10
Hermit Thrush	<i>Catharus guttatus</i>	-	-	-	S5B	127
Least Flycatcher	<i>Empidonax minimus</i>	-	-	-	S5B	24
Lincoln's Sparrow	<i>Melospiza lincolnii</i>	-	-	-	S4B	21
Magnolia Warbler	<i>Setophaga magnolia</i>	-	-	-	S4S5B	178
Mourning Warbler	<i>Geothlypis philadelphia</i>	-	-	-	S4B	34
Nashville Warbler	<i>Leiostyris alpestris</i>	-	-	-	S4B,S5M	61
Northern Flicker	<i>Colaptes auratus</i>	-	-	-	S5B	23
Northern Parula	<i>Setophaga americana</i>	-	-	-	S5B	6
Northern Saw-whet Owl	<i>Aegolius acadicus</i>	-	-	-	S4?B	1
Northern Waterthrush	<i>Parkesia noveboracensis</i>	-	-	-	S5B	7
Olive-sided Flycatcher	<i>Contopus cooperi</i>	Special Concern	Special Concern	Threatened	S3B	7
Ovenbird	<i>Seiurus aurocapilla</i>	-	-	-	S5B	75
Palm Warbler	<i>Setophaga palmarum</i>	-	-	-	S5B	95
Pileated Woodpecker	<i>Dryocopus pileatus</i>	-	-	-	S5	7
Purple Finch	<i>Haemorhous purpureus</i>	-	-	-	S5B,S4N	18
Red Crossbill	<i>Loxia curvirostra</i>	-	-	-	S4	5
Red-breasted Nuthatch	<i>Sitta canadensis</i>	-	-	-	S5	2
Red-eyed Vireo	<i>Vireo olivaceus</i>	-	-	-	S5B	44
Ruby-crowned Kinglet	<i>Corthylio calendula</i>	-	-	-	S4B,S5M	52

Table 9: 2023 Breeding Bird Point Count Survey Results Summary - Harbour Hills Wind Project

Project # 25-11682

Common name	Scientific Name	SARA Status	COSEWIC Status	ESA Status	NS S-Rank	Number Observed
Ruby-throated Hummingbird	<i>Archilochus colubris</i>	-	-	-	S5B	4
Ruffed Grouse	<i>Bonasa umbellus</i>	-	-	-	S5	10
Rusty Blackbird	<i>Euphagus carolinus</i>	Special Concern	Special Concern	Endangered	S2S3B	3
Savannah Sparrow	<i>Passerculus sandwichensis</i>	-	-	-	S4B,S5M	5
Song Sparrow	<i>Melospiza melodia</i>	-	-	-	S5B	1
Swainson's Thrush	<i>Catharus ustulatus</i>	-	-	-	S4B,S5M	66
Swamp Sparrow	<i>Melospiza georgiana</i>	-	-	-	S5B	8
Tree Swallow	<i>Tachycineta bicolor</i>	-	-	-	S4S5B	5
White-throated Sparrow	<i>Zonotrichia albicollis</i>	-	-	-	S4S5B,S5M	178
White-winged Crossbill	<i>Loxia leucoptera</i>	-	-	-	S4S5	9
Wilson's Snipe	<i>Gallinago delicata</i>	-	-	-	S3B,S4M	1
Winter Wren	<i>Troglodytes hiemalis</i>	-	-	-	S5B	41
Yellow Warbler	<i>Setophaga petechia</i>	-	-	-	S5B	4
Yellow-bellied Flycatcher	<i>Empidonax flaviventris</i>	-	-	-	S4B,S5M	126
Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>	-	-	-	S5B	17
Yellow-rumped Warbler	<i>Setophaga coronata</i>	-	-	-	S5B	61
Woodpecker Sp.	N/A	N/A	N/A	N/A	N/A	6

Observer	Date	Survey Type	Survey Location	Start Time	Species Code	Common Name	Scientific Name	#	Bearing	Distance (m)	Comments	Habitat
Chris Pepper	16-Jun-23	Nightjar	evw coni 4	8:54 PM	N/A	N/A	N/A	0			No birds observed	Power corridor, scrubby conifer
Chris Pepper	16-Jun-23	Nightjar	evw coni 5	9:05 PM	BDOW	Barred Owl	<i>Strix varia</i>	1	SW	1000		Large regenerating cut
Chris Pepper	16-Jun-23	Nightjar	evw coni 6	9:17 PM	BDOW	Barred Owl	<i>Strix varia</i>	1	SE	1000		Scrubby bog
Chris Pepper	16-Jun-23	Nightjar	evw coni 2	9:33 PM	N/A	N/A	N/A	0			No birds observed	Small cut near lake
Chris Pepper	16-Jun-23	Nightjar	evw coni 1	9:43 PM	CONI	Common Nighthawk	<i>Chordeiles minor</i>	1	S	100	Incidental seen in headlights while driving	Regenerating partial cut
Chris Pepper	16-Jun-23	Nightjar	evw coni 9	10:26 PM	BDOW	Barred Owl	<i>Strix varia</i>	1	N	1000		Too dark to tell
Chris Pepper	20-Jun	Nightjar	evw coni 10	8:35 PM	N/A	N/A	N/A	0			No birds observed	Mature mixed woods, cameron lakes to north
Chris Pepper	20-Jun	Nightjar	evw coni 11	8:51 PM	CONI	Common Nighthawk	<i>Chordeiles minor</i>	1	E	100	Call, wing boom	Young/med mixed woods, some cutting, hard to tell how extensive
Chris Pepper	20-Jun	Nightjar	evw coni 11		CONI	Common Nighthawk	<i>Chordeiles minor</i>	1	W	100	Call, wing boom	
Chris Pepper	20-Jun	Nightjar	evw coni 11		CONI	Common Nighthawk	<i>Chordeiles minor</i>	1	S	500	Wing boom	
Chris Pepper	20-Jun	Nightjar	evw coni 12	9:04 PM	CONI	Common Nighthawk	<i>Chordeiles minor</i>	1	NE?	1000	Faint boom in distance, hard to tell direction	Med conifer, distant wetlands
Chris Pepper	20-Jun	Nightjar	evw coni 13	9:16 PM	CONI	Common Nighthawk	<i>Chordeiles minor</i>	1	SW	500	Call, wing boom	Young woods, distant wetlands and cuts
Chris Pepper	20-Jun	Nightjar	evw coni 15	9:46 PM	N/A	N/A	N/A	0			No birds observed	Young regen
Chris Pepper	01-Jul	Nightjar	evw coni 10	8:46 PM	N/A	N/A	N/A	0			No birds observed	
Chris Pepper	01-Jul	Nightjar	evw coni 11	8:54 PM	CONI	Common Nighthawk	<i>Chordeiles minor</i>	1	S	100	Call, wing boom	
Chris Pepper	01-Jul	Nightjar	evw coni 11		CONI	Common Nighthawk	<i>Chordeiles minor</i>	1	NE	100	Call	
Chris Pepper	01-Jul	Nightjar	evw coni 11		CONI	Common Nighthawk	<i>Chordeiles minor</i>	1	N	250	Call	
Chris Pepper	01-Jul	Nightjar	evw coni 12	9:06 PM	N/A	N/A	N/A	0			No birds observed	
Chris Pepper	01-Jul	Nightjar	evw coni 13	9:19 PM	CONI	Common Nighthawk	<i>Chordeiles minor</i>	1	S	500		
Chris Pepper	01-Jul	Nightjar	evw coni 15	10:02 PM	N/A	N/A	N/A	0			No birds observed	

Table 11: 2023 Fall Migration Point Count Survey Results - Harbour Hills Wind Project

Observer	Date	Survey Location	Start Time	Species Code	Common Name	Scientific Name	#	Distance (m)	Bearing	Behaviour	Flyover Height (m)	Flight Direction	Comments
Chris Pepper	24-Aug-23	evw 105	6:24 AM	REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	2	50	N	Calling			
Chris Pepper	24-Aug-23	evw 105		WWCR	White-winged Crossbill	<i>Loxia leucoptera</i>	3	0		Calling			
Chris Pepper	24-Aug-23	evw 105		N/A	Warbler Sp.	N/A	3	0		Calling			
Chris Pepper	24-Aug-23	evw 105		COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1	0		Calling			
Chris Pepper	24-Aug-23	evw 105		RECR	Red Crossbill	<i>Loxia curvirostra</i>	2	50	N	Calling			
Chris Pepper	24-Aug-23	evw 105		HETH	Hermit Thrush	<i>Catharus guttatus</i>	2	0		Calling			
Chris Pepper	24-Aug-23	evw 105		BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1	0		Calling			
Chris Pepper	24-Aug-23	evw 105		NOPA	Northern Parula	<i>Setophaga americana</i>	1	0		Calling			
Chris Pepper	24-Aug-23	evw 105		MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	1	0		Calling			
Chris Pepper	24-Aug-23	evw 105		AMRE	American Redstart	<i>Setophaga ruticilla</i>	1	0		Calling			
Chris Pepper	24-Aug-23	evw 106	6:48 AM	BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1	0	N	Calling			
Chris Pepper	24-Aug-23	evw 106		HETH	Hermit Thrush	<i>Catharus guttatus</i>	1	0		Calling			
Chris Pepper	24-Aug-23	evw 106		BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1	0		Calling			
Chris Pepper	24-Aug-23	evw 106		AMRE	American Redstart	<i>Setophaga ruticilla</i>	1	0		Calling			
Chris Pepper	24-Aug-23	evw 106		YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	2	0		Calling			
Chris Pepper	24-Aug-23	evw 106		BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1	0		Calling			
Chris Pepper	24-Aug-23	evw 106		GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	2	0		Calling			
Chris Pepper	24-Aug-23	evw 106		PAWA	Palm Warbler	<i>Setophaga palmarum</i>	4	0		Calling			
Chris Pepper	24-Aug-23	evw 106		N/A	Warbler Sp.	N/A	15	0		Calling			
Chris Pepper	24-Aug-23	evw 106		WWCR	White-winged Crossbill	<i>Loxia leucoptera</i>	2	0		Calling			
Chris Pepper	24-Aug-23	evw 106		COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1	0		Calling			
Chris Pepper	24-Aug-23	evw 106		EAWP	Eastern Wood-pewee	<i>Contopus virens</i>	1	100	NW	Calling			
Chris Pepper	24-Aug-23	evw 106		REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	1	100		Calling			
Chris Pepper	24-Aug-23	evw 107	7:04 AM	N/A	Warbler Sp.	N/A	2	50		Calling			
Chris Pepper	24-Aug-23	evw 107		WWCR	White-winged Crossbill	<i>Loxia leucoptera</i>	1	100		Calling			
Chris Pepper	24-Aug-23	evw 107		PAWA	Palm Warbler	<i>Setophaga palmarum</i>	2	0		Calling			
Chris Pepper	24-Aug-23	evw 117	7:20 AM	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	1	100		Calling			
Chris Pepper	24-Aug-23	evw 117		WWCR	White-winged Crossbill	<i>Loxia leucoptera</i>	2	100		Calling			
Chris Pepper	24-Aug-23	evw 117		YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1	0		Foraging			
Chris Pepper	24-Aug-23	evw 117		LEFL	Least Flycatcher	<i>Empidonax minimus</i>	1	0		Calling			
Chris Pepper	24-Aug-23	evw 117		BLBW	Blackburnian Warbler	<i>Setophaga fusca</i>	1	0		Foraging			
Chris Pepper	24-Aug-23	evw 118	7:45 AM	BBWA	Bay-breasted Warbler	<i>Setophaga castanea</i>	1	0		Calling			
Chris Pepper	24-Aug-23	evw 118		COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	2	0		Singing			
Chris Pepper	24-Aug-23	evw 118		REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	1	50		Singing			
Chris Pepper	24-Aug-23	evw 118		HETH	Hermit Thrush	<i>Catharus guttatus</i>	1	50		Calling			
Chris Pepper	24-Aug-23	evw 118		N/A	Warbler Sp.	N/A	1	50		Calling			
Chris Pepper	24-Aug-23	evw 130	8:05 AM	WWCR	White-winged Crossbill	<i>Loxia leucoptera</i>	3	0		Calling			
Chris Pepper	24-Aug-23	evw 130		BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1	0		Foraging			
Chris Pepper	24-Aug-23	evw 130		MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	1	0		Calling			
Chris Pepper	24-Aug-23	evw 130		AMCR	American Crow	<i>Corvus brachyrhynchos</i>	1	0		Calling			
Chris Pepper	24-Aug-23	evw 130		DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1	0		Calling			
Chris Pepper	24-Aug-23	evw 130		COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	2	0		Calling			
Chris Pepper	24-Aug-23	evw 130		BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1	0		Calling			

Table 11: 2023 Fall Migration Point Count Survey Results - Harbour Hills Wind Project

Observer	Date	Survey Location	Start Time	Species Code	Common Name	Scientific Name	#	Distance (m)	Bearing	Behaviour	Flyover Height (m)	Flight Direction	Comments
Chris Pepper	24-Aug-23	evw 130		MOWA	Mourning Warbler	<i>Geothlypis philadelphia</i>	1	0		Singing			
Chris Pepper	24-Aug-23	evw 130		CEDW	Cedar Waxwing	<i>Bombycilla cedrorum</i>	2	100		Calling			
Chris Pepper	24-Aug-23	evw 130		BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	2	0		Singing			
Chris Pepper	24-Aug-23	evw 130		BCCH	Black-capped Chickadee	<i>Poecile atricapillus</i>	2	50		Calling			
Chris Pepper	24-Aug-23	evw 130		WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1	0		Calling			
Chris Pepper	24-Aug-23	evw 132	8:23 AM	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1	0		Calling			
Chris Pepper	24-Aug-23	evw 132		WWCR	White-winged Crossbill	<i>Loxia leucoptera</i>	1	0		Calling			
Chris Pepper	24-Aug-23	evw 132		HETH	Hermit Thrush	<i>Catharus guttatus</i>	1	0		Calling			
Chris Pepper	24-Aug-23	evw 132		COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1	0		Calling			
Chris Pepper	24-Aug-23	evw 132		N/A	Warbler Sp.	N/A	1	0		Foraging			
Chris Pepper	24-Aug-23	evw 132		AMRO	American Robin	<i>Turdus migratorius</i>	1	100		Calling			
Chris Pepper	24-Aug-23	evw 132		BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1	50		Calling			
Chris Pepper	24-Aug-23	evw 132		NOFL	Northern Flicker	<i>Colaptes auratus</i>	1	100		Calling			
Chris Pepper	24-Aug-23	evw 133	8:48 AM	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1	0		Calling			
Chris Pepper	24-Aug-23	evw 133		CAWA	Canada Warbler	<i>Cardellina canadensis</i>	1	0		Singing			
Chris Pepper	24-Aug-23	evw 133		AMRE	American Redstart	<i>Setophaga ruticilla</i>	1	0		Foraging			
Chris Pepper	24-Aug-23	evw 133		BLBW	Blackburnian Warbler	<i>Setophaga fusca</i>	1	0		Foraging			
Chris Pepper	24-Aug-23	evw 133		PAWA	Palm Warbler	<i>Setophaga palmarum</i>	3	0		Foraging			
Chris Pepper	24-Aug-23	evw 133		BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1	0		Foraging			
Chris Pepper	24-Aug-23	evw 133		YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1	0		Calling			
Chris Pepper	24-Aug-23	evw 133		MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	1	0		Foraging			
Chris Pepper	24-Aug-23	evw 133		HAWO	Hairy Woodpecker	<i>Dryobates villosus</i>	1	0		Calling			
Chris Pepper	24-Aug-23	evw 133		WWCR	White-winged Crossbill	<i>Loxia leucoptera</i>	1	100		Calling			
Chris Pepper	24-Aug-23	evw 133		RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1	100		Singing			
Chris Pepper	24-Aug-23	evw 133		GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	0		Calling			
Chris Pepper	24-Aug-23	evw 134	9:07 AM	CAJA	Canada Jay	<i>Perisoreus canadensis</i>	1	100	N	Calling			
Chris Pepper	24-Aug-23	evw 134		COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	3	50		Calling			
Chris Pepper	24-Aug-23	evw 134		REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	1	50		Calling			
Chris Pepper	24-Aug-23	evw 136	9:25 AM	SWSP	Swamp Sparrow	<i>Melospiza georgiana</i>	1	0		Calling			
Chris Pepper	24-Aug-23	evw 136		WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1	100		Calling			
Chris Pepper	24-Aug-23	evw 136		N/A	Woodpecker Sp.	N/A	2	100		Drumming			
Chris Pepper	24-Aug-23	evw 136		GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	0		Calling			
Chris Pepper	24-Aug-23	evw 136		WWCR	White-winged Crossbill	<i>Loxia leucoptera</i>	2	100		Calling			
Chris Pepper	24-Aug-23	evw 136		PUFI	Purple Finch	<i>Haemorhous purpureus</i>	1	100		Calling			
Chris Pepper	28-Aug	evw 174	6:46 AM	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	4	0		Calling			
Chris Pepper	28-Aug	evw 174		WWCR	White-winged Crossbill	<i>Loxia leucoptera</i>	3	50		Singing			
Chris Pepper	28-Aug	evw 174		BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1	0		Calling			
Chris Pepper	28-Aug	evw 174		CAJA	Canada Jay	<i>Perisoreus canadensis</i>	2	50	N	Calling			
Chris Pepper	28-Aug	evw 174		WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	2	0		Singing			
Chris Pepper	28-Aug	evw 174		COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	2	0		Calling			
Chris Pepper	28-Aug	evw 174		HETH	Hermit Thrush	<i>Catharus guttatus</i>	1	0		Calling			
Chris Pepper	28-Aug	evw 174		BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1	0		Calling			
Chris Pepper	28-Aug	evw 174		NAWA	Nashville Warbler	<i>Leiothlypis ruficapilla</i>	1	0		Calling			

Table 11: 2023 Fall Migration Point Count Survey Results - Harbour Hills Wind Project

Observer	Date	Survey Location	Start Time	Species Code	Common Name	Scientific Name	#	Distance (m)	Bearing	Behaviour	Flyover Height (m)	Flight Direction	Comments
Chris Pepper	28-Aug	evw 174		MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	1	0		Calling			
Chris Pepper	28-Aug	evw 174		PIWO	Pileated Woodpecker	<i>Dryocopus pileatus</i>	1	100		Calling			
Chris Pepper	28-Aug	evw 174		AMGO	American Goldfinch	<i>Spinus tristis</i>	1	50	NE	Flyover	-50	SW	
Chris Pepper	28-Aug	evw 174		PUFI	Purple Finch	<i>Haemorrhous purpureus</i>	1	50		Calling			
Chris Pepper	28-Aug	evw 174		N/A	Warbler Sp.	N/A	1	0	E	Flyover			
Chris Pepper	28-Aug	evw 173(moved)	7:04 AM	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	2	100		Calling			
Chris Pepper	28-Aug	evw 173(moved)		WWCR	White-winged Crossbill	<i>Loxia leucoptera</i>	2	50		Calling			
Chris Pepper	28-Aug	evw 173(moved)		CAJA	Canada Jay	<i>Perisoreus canadensis</i>	1	50	N	Calling			
Chris Pepper	28-Aug	evw 173(moved)		COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	3	0		Calling			
Chris Pepper	28-Aug	evw 173(moved)		PAWA	Palm Warbler	<i>Setophaga palmarum</i>	3	0		Foraging			
Chris Pepper	28-Aug	evw 173(moved)		AMRE	American Redstart	<i>Setophaga ruticilla</i>	1	0		Foraging			
Chris Pepper	28-Aug	evw 173(moved)		MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	2	0		Foraging			
Chris Pepper	28-Aug	evw 173(moved)		COLO	Common Loon	<i>Gavia immer</i>	1	1000	S	Calling			
Chris Pepper	28-Aug	evw 173(moved)		BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1	0		Singing			
Chris Pepper	28-Aug	evw 173(moved)		HETH	Hermit Thrush	<i>Catharus guttatus</i>	1	0		Calling			
Chris Pepper	28-Aug	evw 175	7:33 AM	WWCR	White-winged Crossbill	<i>Loxia leucoptera</i>	3	0		Singing			
Chris Pepper	28-Aug	evw 175		BCCH	Black-capped Chickadee	<i>Poecile atricapillus</i>	1	0		Calling			
Chris Pepper	28-Aug	evw 175		AMRE	American Redstart	<i>Setophaga ruticilla</i>	1	0		Singing			
Chris Pepper	28-Aug	evw 175		NAWA	Nashville Warbler	<i>Leiothlypis ruficapilla</i>	2	0		Foraging			
Chris Pepper	28-Aug	evw 175		MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	2	0		Foraging			
Chris Pepper	28-Aug	evw 175		BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1	0		Singing			
Chris Pepper	28-Aug	evw 175		COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	2	0		Singing			
Chris Pepper	28-Aug	evw 175		CEDW	Cedar Waxwing	<i>Bombycilla cedrorum</i>	1	50		Calling			
Chris Pepper	28-Aug	evw 175		PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1	0		Calling			
Chris Pepper	28-Aug	evw 175		AMCR	American Crow	<i>Corvus brachyrhynchos</i>	1	50		Calling			
Chris Pepper	28-Aug	evw 175		BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1	50		Singing			
Chris Pepper	28-Aug	evw 175		NOFL	Northern Flicker	<i>Colaptes auratus</i>	1	100		Calling			
Chris Pepper	28-Aug	evw 176	7:49 AM	PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1	0		Calling			
Chris Pepper	28-Aug	evw 176		SWSP	Swamp Sparrow	<i>Melospiza georgiana</i>	1	0		Calling			
Chris Pepper	28-Aug	evw 176		WHIM	Whimbrel	<i>Numenius phaeopus</i>	1	250	SW	Calling			
Chris Pepper	28-Aug	evw 176		SAVS	Savannah Sparrow	<i>Passerculus sandwichensis</i>	3	0		Foraging			
Chris Pepper	28-Aug	evw 176		COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	6	0		Foraging			
Chris Pepper	28-Aug	evw 176		SOSP	Song Sparrow	<i>Melospiza melodia</i>	1	0		Calling			
Chris Pepper	28-Aug	evw 176		BCCH	Black-capped Chickadee	<i>Poecile atricapillus</i>	1	0		Calling			
Chris Pepper	28-Aug	evw 176		NOFL	Northern Flicker	<i>Colaptes auratus</i>	1	0		Calling			
Chris Pepper	28-Aug	evw 176		BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1	0		Foraging			
Chris Pepper	28-Aug	evw 176		AMRE	American Redstart	<i>Setophaga ruticilla</i>	1	0		Foraging			
Chris Pepper	28-Aug	evw 176		YEWA	Yellow Warbler	<i>Setophaga petechia</i>	2	0		Foraging			
Chris Pepper	28-Aug	evw 176		LISP	Lincoln's Sparrow	<i>Melospiza lincolnii</i>	1	50		Singing			
Chris Pepper	28-Aug	evw 176		N/A	Warbler Sp.	N/A	3	0		Flyover			
Chris Pepper	28-Aug	evw 177	8:12 AM	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	4	0		Foraging			Adults feeding young
Chris Pepper	28-Aug	evw 177		BCCH	Black-capped Chickadee	<i>Poecile atricapillus</i>	3	0		Calling			

Table 11: 2023 Fall Migration Point Count Survey Results - Harbour Hills Wind Project

Observer	Date	Survey Location	Start Time	Species Code	Common Name	Scientific Name	#	Distance (m)	Bearing	Behaviour	Flyover Height (m)	Flight Direction	Comments
Chris Pepper	28-Aug	evw 177		CMWA	Cape May Warbler	<i>Setophaga tigrina</i>	1	0		Foraging			
Chris Pepper	28-Aug	evw 177		BLBW	Blackburnian Warbler	<i>Setophaga fusca</i>	1	0		Foraging			
Chris Pepper	28-Aug	evw 177		BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	2	0		Foraging			
Chris Pepper	28-Aug	evw 177		NAWA	Nashville Warbler	<i>Leiothlypis ruficapilla</i>	1	0		Foraging			
Chris Pepper	28-Aug	evw 177		PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1	0		Foraging			
Chris Pepper	28-Aug	evw 177		WWCR	White-winged Crossbill	<i>Loxia leucoptera</i>	3	0		Singing			
Chris Pepper	28-Aug	evw 177		AMRE	American Redstart	<i>Setophaga ruticilla</i>	1	0		Foraging			
Chris Pepper	28-Aug	evw 177		GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	3	0		Calling			
Chris Pepper	28-Aug	evw 177		AMRO	American Robin	<i>Turdus migratorius</i>	1	0		Calling			
Chris Pepper	28-Aug	evw 169	8:45 AM	WWCR	White-winged Crossbill	<i>Loxia leucoptera</i>	3	50		Calling			
Chris Pepper	28-Aug	evw 170	9:12 AM	BOCH	Boreal Chickadee	<i>Poecile hudsonicus</i>	2	0	W	Calling			
Chris Pepper	28-Aug	evw 172	9:34 AM	WWCR	White-winged Crossbill	<i>Loxia leucoptera</i>	2	0		Singing			
Chris Pepper	28-Aug	evw 171	9:51 AM	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	2	0		Calling			
Chris Pepper	28-Aug	Evw 168	10:38 AM	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	2	0		Calling			
Chris Pepper	28-Aug	evw 167	10:51 AM	AMRO	American Robin	<i>Turdus migratorius</i>	2	50		Calling			
Chris Pepper	28-Aug	evw 164	11:04 AM	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	50		Calling			
Chris Pepper	31-Aug	evw 189	7:08 AM	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	2	0		Calling			
Chris Pepper	31-Aug	evw 189		PIWO	Pileated Woodpecker	<i>Dryocopus pileatus</i>	1	250		Calling			
Chris Pepper	31-Aug	evw 189		CEDW	Cedar Waxwing	<i>Bombycilla cedrorum</i>	1	0		Calling			
Chris Pepper	31-Aug	evw 189		N/A	Warbler Sp.	N/A	1	0		Passing			
Chris Pepper	31-Aug	evw 189		RECR	Red Crossbill	<i>Loxia curvirostra</i>	1	100	NE	Calling			
Chris Pepper	31-Aug	evw 189		NOFL	Northern Flicker	<i>Colaptes auratus</i>	1	100		Calling			
Chris Pepper	31-Aug	evw 189		MOWA	Mourning Warbler	<i>Geothlypis philadelphia</i>	1	0		Singing			
Chris Pepper	31-Aug	evw 189		YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	2	0		Calling			
Chris Pepper	31-Aug	evw 157	7:29 AM	SWSP	Swamp Sparrow	<i>Melospiza georgiana</i>	2	0		Foraging			
Chris Pepper	31-Aug	evw 157		WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	2	0		Foraging			
Chris Pepper	31-Aug	evw 157		COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	3	0		Foraging			
Chris Pepper	31-Aug	evw 157		PIWO	Pileated Woodpecker	<i>Dryocopus pileatus</i>	1	100	E	Calling			
Chris Pepper	31-Aug	evw 157		WWCR	White-winged Crossbill	<i>Loxia leucoptera</i>	1	100		Calling			
Chris Pepper	31-Aug	evw 153	7:46 AM	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	2	0		Calling			
Chris Pepper	31-Aug	evw 153		PIWO	Pileated Woodpecker	<i>Dryocopus pileatus</i>	1	250	W	Calling			
Chris Pepper	31-Aug	evw 153		WWCR	White-winged Crossbill	<i>Loxia leucoptera</i>	1	100		Calling			
Chris Pepper	31-Aug	evw 153		N/A	Warbler Sp.	N/A	1	50		Calling			
Chris Pepper	31-Aug	evw 153		CAJA	Canada Jay	<i>Perisoreus canadensis</i>	1	100	SW	Calling			
Chris Pepper	31-Aug	evw 156	8:03 AM	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1	0		Calling			
Chris Pepper	31-Aug	evw 156		BWHA	Broad-winged Hawk	<i>Buteo platypterus</i>	1	0		Flushed			
Chris Pepper	31-Aug	evw 156		BLJA	Blue Jay	<i>Cyanocitta cristata</i>	1	100		Calling			
Chris Pepper	31-Aug	evw 156		BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	2	0		Calling			
Chris Pepper	31-Aug	evw 156		OSPR	Osprey	<i>Pandion haliaetus</i>	1	500		Calling			
Chris Pepper	31-Aug	evw 156		BCCH	Black-capped Chickadee	<i>Poecile atricapillus</i>	2	50		Calling			
Chris Pepper	31-Aug	evw 156		SWSP	Swamp Sparrow	<i>Melospiza georgiana</i>	1	0		Calling			
Chris Pepper	31-Aug	evw 156		N/A	Warbler Sp.	N/A	1	0	SW	Passing	-50	NE	
Chris Pepper	31-Aug	evw 156		YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1	0		Calling			

Table 11: 2023 Fall Migration Point Count Survey Results - Harbour Hills Wind Project

Observer	Date	Survey Location	Start Time	Species Code	Common Name	Scientific Name	#	Distance (m)	Bearing	Behaviour	Flyover Height (m)	Flight Direction	Comments
Chris Pepper	31-Aug	evw 155	8:23 AM	RECR	Red Crossbill	<i>Loxia curvirostra</i>	2	100	S	Calling			
Chris Pepper	31-Aug	evw 155		BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1	0		Singing			
Chris Pepper	31-Aug	evw 155		BCCH	Black-capped Chickadee	<i>Poecile atricapillus</i>	2	0		Singing			
Chris Pepper	31-Aug	evw 155		WWCR	White-winged Crossbill	<i>Loxia leucoptera</i>	2	100		Calling			
Chris Pepper	31-Aug	evw 155		COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1	0		Singing			
Chris Pepper	31-Aug	evw 155		CEDW	Cedar Waxwing	<i>Bombycilla cedrorum</i>	1	0		Calling			
Chris Pepper	31-Aug	evw 155		BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1	0		Singing			
Chris Pepper	31-Aug	evw 155		CAJA	Canada Jay	<i>Perisoreus canadensis</i>	1	100	W	Calling			
Chris Pepper	31-Aug	evw 155		HAWO	Hairy Woodpecker	<i>Dryobates villosus</i>	1	50		Calling			
Chris Pepper	31-Aug	evw 155		MOWA	Mourning Warbler	<i>Geothlypis philadelphia</i>	1	0		Calling			
Chris Pepper	31-Aug	evw 155		AMRE	American Redstart	<i>Setophaga ruticilla</i>	1	0		Singing			
Chris Pepper	31-Aug	evw 155		REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	1	0		Calling			
Chris Pepper	31-Aug	evw 155		N/A	Warbler Sp.	N/A	2	0		Passing			
Chris Pepper	31-Aug	evw 154	8:41 AM	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	2	0		Calling			Lots of water noise, hard to hear birds
Chris Pepper	31-Aug	evw 158	8:56 AM	BLBW	Blackburnian Warbler	<i>Setophaga fusca</i>	1	0		Calling			Lots of water noise, hard to hear birds
Chris Pepper	31-Aug	evw 158		BCCH	Black-capped Chickadee	<i>Poecile atricapillus</i>	1	0		Calling			
Chris Pepper	31-Aug	evw 159	9:12 AM	HETH	Hermit Thrush	<i>Catharus guttatus</i>	1	0		Calling			
Chris Pepper	31-Aug	evw 159		COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	2	0		Calling			
Chris Pepper	31-Aug	evw 159		BCCH	Black-capped Chickadee	<i>Poecile atricapillus</i>	1	100		Calling			
Chris Pepper	31-Aug	evw 160	9:29 AM	NOFL	Northern Flicker	<i>Colaptes auratus</i>	1	100		Calling			
Chris Pepper	31-Aug	evw 160		N/A	Woodpecker Sp.	N/A	1	50		Foraging			
Chris Pepper	31-Aug	evw 160		RTHU	Ruby-throated Hummingbird	<i>Archilochus colubris</i>	1	0		Passing			
Chris Pepper	31-Aug	evw 160		COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1	0		Calling			
Chris Pepper	31-Aug	evw 160		BOCH	Boreal Chickadee	<i>Poecile hudsonicus</i>	2	0		Foraging			
Chris Pepper	31-Aug	evw 163	9:48 AM	COLO	Common Loon	<i>Gavia immer</i>	1	0	N	Flyover	100	S	
Chris Pepper	31-Aug	evw 163		WWCR	White-winged Crossbill	<i>Loxia leucoptera</i>	2	100	W	Passing	-50	S	
Chris Pepper	31-Aug	evw 163		REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	1	0		Calling			
Chris Pepper	31-Aug	evw 163		BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1	0		Singing			
Chris Pepper	31-Aug	evw 162	10:08 AM	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1	0		Calling			
Chris Pepper	31-Aug	evw 162		WWCR	White-winged Crossbill	<i>Loxia leucoptera</i>	1	50		Calling			
Chris Pepper	31-Aug	evw 162		AMGO	American Goldfinch	<i>Spinus tristis</i>	1	0		Calling			
Chris Pepper	31-Aug	evw 162		WHIM	White-crowned Sparrow	<i>Zonotrichia leucophrys</i>	1	250	NE	Flyover	50	W	
Chris Pepper	31-Aug	evw 162		BLJA	Blue Jay	<i>Cyanocitta cristata</i>	1	100		Calling			
Chris Pepper	31-Aug	evw 162		NOFL	Northern Flicker	<i>Colaptes auratus</i>	1	50		Calling			
Chris Pepper	31-Aug	evw 162		YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1	0		Calling			
Chris Pepper	31-Aug	evw 162		WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1	0		Calling			
Chris Pepper	31-Aug	evw 162		BCCH	Black-capped Chickadee	<i>Poecile atricapillus</i>	2	0		Calling			
Chris Pepper	31-Aug	evw 162		GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	0		Calling			
Chris Pepper	31-Aug	evw 162		PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1	0		Calling			
Chris Pepper	31-Aug	evw 161	10:25 AM	NOFL	Northern Flicker	<i>Colaptes auratus</i>	1	50		Calling			
Chris Pepper	31-Aug	evw 161		MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	1	0		Foraging			

Table 11: 2023 Fall Migration Point Count Survey Results - Harbour Hills Wind Project

Observer	Date	Survey Location	Start Time	Species Code	Common Name	Scientific Name	#	Distance (m)	Bearing	Behaviour	Flyover Height (m)	Flight Direction	Comments
Chris Pepper	31-Aug	evw 161		DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1	0		Foraging			
Chris Pepper	31-Aug	evw 161		WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1	0		Foraging			
Chris Pepper	31-Aug	evw 161		AMRE	American Redstart	<i>Setophaga ruticilla</i>	1	0		Foraging			
Chris Pepper	31-Aug	evw 161		BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1	0		Foraging			
Chris Pepper	31-Aug	evw 161		N/A	Warbler Sp.	N/A	4	0		Passing			
Chris Pepper	31-Aug	evw 161		RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1	0		Foraging			
Chris Pepper	07-Sep	evw 116	6:57 AM	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	2	0		Singing			
Chris Pepper	07-Sep	evw 116		BCCH	Black-capped Chickadee	<i>Poecile atricapillus</i>	2	50		Calling			
Chris Pepper	07-Sep	evw 116		RECR	Red Crossbill	<i>Loxia curvirostra</i>	2	100	E	Calling			
Chris Pepper	07-Sep	evw 116		WIWR	Winter Wren	<i>Troglodytes hiemalis</i>	1	50		Calling			
Chris Pepper	07-Sep	evw 116		REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	1	50		Singing			
Chris Pepper	07-Sep	evw 116		BLPW	Blackpoll Warbler	<i>Setophaga striata</i>	1	0		Calling			
Chris Pepper	07-Sep	evw 116		MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	1	0		Calling			
Chris Pepper	07-Sep	evw 116		N/A	Warbler Sp.	N/A	1	0		Calling			
Chris Pepper	07-Sep	evw 115	7:17 AM	N/A	Warbler Sp.	N/A	2	0		Passing			
Chris Pepper	07-Sep	evw 115		SPGR	Spruce Grouse	<i>Canachites canadensis</i>	2	na	Unknown	Flushed			
Chris Pepper	07-Sep	evw 114	7:37 AM	NOFL	Northern Flicker	<i>Colaptes auratus</i>	1	0		Calling			
Chris Pepper	07-Sep	evw 114		COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1	0		Calling			
Chris Pepper	07-Sep	evw 114		YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1	0		Calling			
Chris Pepper	07-Sep	evw 114		PUFI	Purple Finch	<i>Haemorhous purpureus</i>	2	50	SW	Calling			
Chris Pepper	07-Sep	evw 114		SPGR	Spruce Grouse	<i>Canachites canadensis</i>	1	0		Flished			
Chris Pepper	07-Sep	evw 113	7:53 AM	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1	0		Calling			
Chris Pepper	07-Sep	evw 113		YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1	0		Calling			
Chris Pepper	07-Sep	evw 113		WWCR	White-winged Crossbill	<i>Loxia leucoptera</i>	2	0		Calling			
Chris Pepper	07-Sep	evw 112	8:10 AM	BLPW	Blackpoll Warbler	<i>Setophaga striata</i>	1	0		Calling			
Chris Pepper	07-Sep	evw 112		COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1	0		Singing			
Chris Pepper	07-Sep	evw 112		WWCR	White-winged Crossbill	<i>Loxia leucoptera</i>	2	100		Calling			
Chris Pepper	07-Sep	evw 111	8:26 AM	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	2	100		Calling			
Chris Pepper	07-Sep	evw 111		N/A	Warbler Sp.	N/A	1	0		Calling			
Chris Pepper	07-Sep	evw 111		AMRO	American Robin	<i>Turdus migratorius</i>	4	0		Passing			
Chris Pepper	07-Sep	evw 110	8:42 AM	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	2	0		Calling			
Chris Pepper	07-Sep	evw 110		BLJA	Blue Jay	<i>Cyanocitta cristata</i>	2	100		Calling			
Chris Pepper	07-Sep	evw 110		BLPW	Blackpoll Warbler	<i>Setophaga striata</i>	1	0		Calling			
Chris Pepper	07-Sep	evw 119	9:09 AM	N/A	N/A	N/A	0						No birds observed
Chris Pepper	07-Sep	evw 105	9:35 AM	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1	0		Singing			
Chris Pepper	07-Sep	evw 106	9:48 AM	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	2	0		Calling			
Chris Pepper	07-Sep	evw 106		BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	2	0		Foraging			
Chris Pepper	07-Sep	evw 106		REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	1	0		Foraging			
Chris Pepper	07-Sep	evw 106		BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	3	0		Foraging			
Chris Pepper	07-Sep	evw 106		BLPW	Blackpoll Warbler	<i>Setophaga striata</i>	1	0		Foraging			
Chris Pepper	07-Sep	evw 106		BCCH	Black-capped Chickadee	<i>Poecile atricapillus</i>	3	0		Calling			
Chris Pepper	07-Sep	evw 107	10:01 AM	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	1	100		Calling			
Chris Pepper	07-Sep	evw 107		WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	2	0		Calling			

Table 11: 2023 Fall Migration Point Count Survey Results - Harbour Hills Wind Project

Observer	Date	Survey Location	Start Time	Species Code	Common Name	Scientific Name	#	Distance (m)	Bearing	Behaviour	Flyover Height (m)	Flight Direction	Comments
Chris Pepper	07-Sep	evw 107		N/A	Warbler Sp.	N/A	1	0		Calling			
Chris Pepper	07-Sep	evw 107	10:19 AM	N/A	N/A	N/A	0						No birds observed
Chris Pepper	07-Sep	evw 118	10:34 AM	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	1	100		Calling			
Chris Pepper	22-Sep	evw 105	6:58 AM	BCCH	Black-capped Chickadee	<i>Poecile atricapillus</i>	2	0		Calling			
Chris Pepper	22-Sep	evw 105		HETH	Hermit Thrush	<i>Catharus guttatus</i>	1	0		Calling			
Chris Pepper	22-Sep	evw 105		YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1	0		Calling			
Chris Pepper	22-Sep	evw 105		COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1	0		Calling			
Chris Pepper	22-Sep	evw 105		BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1	0		Calling			
Chris Pepper	22-Sep	evw 105		BLJA	Blue Jay	<i>Cyanocitta cristata</i>	1	0		Calling			
Chris Pepper	22-Sep	evw 105		GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	0		Calling			
Chris Pepper	22-Sep	evw 105		BLPW	Blackpoll Warbler	<i>Setophaga striata</i>	1	0		Calling			
Chris Pepper	22-Sep	evw 106	7:12 AM	N/A	Warbler Sp.	N/A	1	0		Calling			Lots of forestry work, hard to hear birds
Chris Pepper	22-Sep	evw 106		YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1	0		Calling			
Chris Pepper	22-Sep	evw 106		DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	2	0		Calling			
Chris Pepper	22-Sep	evw 106		GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	2	0		Calling			
Chris Pepper	22-Sep	evw 106		PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1	0		Calling			
Chris Pepper	22-Sep	evw 106		BLPW	Blackpoll Warbler	<i>Setophaga striata</i>	2	0		Calling			
Chris Pepper	22-Sep	evw 106		MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	1	0		Calling			
Chris Pepper	22-Sep	evw 107	7:25 AM	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1	0		Calling			
Chris Pepper	22-Sep	evw 107		GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	2	0		Calling			
Chris Pepper	22-Sep	evw 107		BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1	0		Singing			
Chris Pepper	22-Sep	evw 107		PIWO	Pileated Woodpecker	<i>Dryocopus pileatus</i>	1	100		Calling			
Chris Pepper	22-Sep	evw 107		BLPW	Blackpoll Warbler	<i>Setophaga striata</i>	2	0					
Chris Pepper	22-Sep	evw 107		BCCH	Black-capped Chickadee	<i>Poecile atricapillus</i>	2	0					
Chris Pepper	22-Sep	evw 107		CAGO	Canada Goose	<i>Branta canadensis</i>	3	0	E	Passing	-50	W	
Chris Pepper	22-Sep	evw 107		PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1	0		Calling			
Chris Pepper	22-Sep	evw 107		CAJA	Canada Jay	<i>Perisoreus canadensis</i>	1	0	NW	Calling			
Chris Pepper	22-Sep	evw 110	7:39 AM	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	6	0		Flushed			
Chris Pepper	22-Sep	evw 110		GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	0		Calling			
Chris Pepper	22-Sep	evw 110		HAWO	Hairy Woodpecker	<i>Dryobates villosus</i>	1	0		Calling			
Chris Pepper	22-Sep	evw 110		BLPW	Blackpoll Warbler	<i>Setophaga striata</i>	1	0		Calling			
Chris Pepper	22-Sep	evw 110		N/A	Warbler Sp.	N/A	1	0		Calling			
Chris Pepper	22-Sep	evw 112	8:00 AM	NOFL	Northern Flicker	<i>Colaptes auratus</i>	1	100		Calling			
Chris Pepper	22-Sep	evw 112		BCCH	Black-capped Chickadee	<i>Poecile atricapillus</i>	1	50		Calling			
Chris Pepper	22-Sep	evw 112		BLJA	Blue Jay	<i>Cyanocitta cristata</i>	1	100		Calling			
Chris Pepper	22-Sep	evw 112		CORA	Common Raven	<i>Corvus corax</i>	1	250		Calling			
Chris Pepper	22-Sep	evw 112		AMCR	American Crow	<i>Corvus brachyrhynchos</i>	2	250		Calling			
Chris Pepper	22-Sep	evw 112		PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1	0		Calling			
Chris Pepper	22-Sep	evw 112		HETH	Hermit Thrush	<i>Catharus guttatus</i>	1	0		Calling			
Chris Pepper	22-Sep	evw 112		N/A	Warbler Sp.	N/A	2	0		Calling			
Chris Pepper	22-Sep	evw 112		NAWA	Nashville Warbler	<i>Leiothlypis ruficapilla</i>	1	0		Calling			

Table 11: 2023 Fall Migration Point Count Survey Results - Harbour Hills Wind Project

Observer	Date	Survey Location	Start Time	Species Code	Common Name	Scientific Name	#	Distance (m)	Bearing	Behaviour	Flyover Height (m)	Flight Direction	Comments
Chris Pepper	22-Sep	evw 112		COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1	0		Calling			
Chris Pepper	22-Sep	evw 112		PUFI	Purple Finch	<i>Haemorhous purpureus</i>	1	50		Calling			
Chris Pepper	22-Sep	evw 111	8:24 AM	NOFL	Northern Flicker	<i>Colaptes auratus</i>	4	100	N	Passing	-50	W	
Chris Pepper	22-Sep	evw 111		GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	2	0		Calling			
Chris Pepper	22-Sep	evw 111		PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1	0		Calling			
Chris Pepper	22-Sep	evw 111		DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1	0		Calling			
Chris Pepper	22-Sep	evw 111		BLJA	Blue Jay	<i>Cyanocitta cristata</i>	1	50		Calling			
Chris Pepper	22-Sep	evw 111		PUFI	Purple Finch	<i>Haemorhous purpureus</i>	1	50		Calling			
Chris Pepper	22-Sep	evw 113	8:44 AM	BLPW	Blackpoll Warbler	<i>Setophaga striata</i>	3	0		Calling			
Chris Pepper	22-Sep	evw 113		SPGR	Spruce Grouse	<i>Canachites canadensis</i>	1	100		Flushed			
Chris Pepper	22-Sep	evw 113		BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1	0		Foraging			
Chris Pepper	22-Sep	evw 113		N/A	Warbler Sp.	N/A	5+	0		Passing			
Chris Pepper	22-Sep	evw 113		HETH	Hermit Thrush	<i>Catharus guttatus</i>	1	0		Calling			
Chris Pepper	22-Sep	evw 113		DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1	0		Calling			
Chris Pepper	22-Sep	evw 116	9:07 AM	BLPW	Blackpoll Warbler	<i>Setophaga striata</i>	1	0		Calling			
Chris Pepper	22-Sep	evw 116		BLJA	Blue Jay	<i>Cyanocitta cristata</i>	1	0		Calling			
Chris Pepper	22-Sep	evw 116		DOWO	Downy Woodpecker	<i>Dryobates pubescens</i>	1	0		Calling			
Chris Pepper	22-Sep	evw 116		AMRO	American Robin	<i>Turdus migratorius</i>	6	50	N	Passing	-50	SE	
Chris Pepper	22-Sep	evw 116		CEDW	Cedar Waxwing	<i>Bombycilla cedrorum</i>	19	0	NE	Passing	-50	SW	
Chris Pepper	22-Sep	evw 116		RBNU	Red-breasted Nuthatch	<i>Sitta canadensis</i>	1	0		Calling			
Chris Pepper	22-Sep	evw 115	9:25 AM	N/A	Blackbird Sp.	N/A	1	0	NE	Passing	-50	N	
Chris Pepper	22-Sep	evw 115		PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1	0		Calling			
Chris Pepper	22-Sep	evw 115		WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1	0		Calling			
Chris Pepper	22-Sep	evw 115		SWSP	Swamp Sparrow	<i>Melospiza georgiana</i>	1	0		Calling			
Chris Pepper	22-Sep	evw 115		BLPW	Blackpoll Warbler	<i>Setophaga striata</i>	2	0		Calling			
Chris Pepper	22-Sep	evw 115		GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	2	0		Calling			
Chris Pepper	22-Sep	evw 115		YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1	0		Calling			
Chris Pepper	22-Sep	evw 115		COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1	0		Calling			
Chris Pepper	22-Sep	evw 115		AMCR	American Crow	<i>Corvus brachyrhynchos</i>	1	100		Calling			
Chris Pepper	22-Sep	evw 114	9:39 AM	BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1	50		Singing			
Chris Pepper	22-Sep	evw 114		COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1	0		Calling			
Chris Pepper	22-Sep	evw 114		PUFI	Purple Finch	<i>Haemorhous purpureus</i>	1	100		Calling			
Chris Pepper	22-Sep	evw 114		AMRO	American Robin	<i>Turdus migratorius</i>	1	0		Passing			
Chris Pepper	22-Sep	evw 114		YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1	0		Calling			
Chris Pepper	22-Sep	evw 114		N/A	Warbler Sp.	N/A	3	100	NE	Passing	50	N	
Chris Pepper	22-Sep	evw 114		BLPW	Blackpoll Warbler	<i>Setophaga striata</i>	2	0		Calling			
Chris Pepper	22-Sep	evw 114		BLJA	Blue Jay	<i>Cyanocitta cristata</i>	1	100		Calling			
Chris Pepper	22-Sep	evw 119	10:03 AM	N/A	Warbler Sp.	N/A	1	0		Calling			
Chris Pepper	22-Sep	evw 119		BLPW	Blackpoll Warbler	<i>Setophaga striata</i>	2	0		Calling			
Chris Pepper	22-Sep	evw 119		CAJA	Canada Jay	<i>Perisoreus canadensis</i>	1	0	NE	Calling			
Chris Pepper	22-Sep	evw 119		GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	0		Calling			
Chris Pepper	22-Sep	evw 119		YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1	0		Calling			
Chris Pepper	22-Sep	evw 119		WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1	0		Calling			

Table 11: 2023 Fall Migration Point Count Survey Results - Harbour Hills Wind Project

Observer	Date	Survey Location	Start Time	Species Code	Common Name	Scientific Name	#	Distance (m)	Bearing	Behaviour	Flyover Height (m)	Flight Direction	Comments
Chris Pepper	22-Sep	evw 119		PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1	0		Calling			
Chris Pepper	22-Sep	evw 119		NOPA	Northern Parula	<i>Setophaga americana</i>	1	0		Calling			
Chris Pepper	22-Sep	evw 120	10:18 AM	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	3	50		Flushed			
Chris Pepper	22-Sep	evw 120		N/A	Warbler Sp.	N/A	1	50		Passing			
Chris Pepper	22-Sep	evw 122	10:32 AM	BCCH	Black-capped Chickadee	<i>Poecile atricapillus</i>	4	0		Calling			
Chris Pepper	22-Sep	evw 122		BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1	0		Singing			
Chris Pepper	22-Sep	evw 122		REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	1	0		Foraging			
Chris Pepper	22-Sep	evw 122		DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1	0		Calling			
Chris Pepper	22-Sep	evw 122		YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1	0		Calling			
Chris Pepper	22-Sep	evw 122		BLPW	Blackpoll Warbler	<i>Setophaga striata</i>	1	0		Calling			
Chris Pepper	22-Sep	evw 122		CAJA	Canada Jay	<i>Perisoreus canadensis</i>	1	0		Calling			
Chris Pepper	22-Sep	evw 121	10:48 AM	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	6	0		Flushed			
Chris Pepper	22-Sep	evw 121		CORA	Common Raven	<i>Corvus corax</i>	2	0		Flushed			
Chris Pepper	22-Sep	evw 121		COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1	0		Foraging			
Chris Pepper	22-Sep	evw 121		BLPW	Blackpoll Warbler	<i>Setophaga striata</i>	2	0		Calling			
Chris Pepper	22-Sep	evw 121		BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1	0		Foraging			
Chris Pepper	22-Sep	evw 121		N/A	Warbler Sp.	N/A	1	0		Passing			
Chris Pepper	22-Sep	evw 121		RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1	0		Calling			
Chris Pepper	23-Sep	evw 189	7:06 AM	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1	0		Calling			
Chris Pepper	23-Sep	evw 189		BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1	0		Calling			
Chris Pepper	23-Sep	evw 189		YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1	0		Calling			
Chris Pepper	23-Sep	evw 189		REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	1	0		Calling			
Chris Pepper	23-Sep	evw 189		BLJA	Blue Jay	<i>Cyanocitta cristata</i>	2	50		Calling			
Chris Pepper	23-Sep	evw 189		AMCR	American Crow	<i>Corvus brachyrhynchos</i>	2	250		Calling			
Chris Pepper	23-Sep	evw 189		CORA	Common Raven	<i>Corvus corax</i>	1	100		Calling			
Chris Pepper	23-Sep	evw 158	7:29 AM	HAWO	Hairy Woodpecker	<i>Dryobates villosus</i>	1	50		Calling			
Chris Pepper	23-Sep	evw 158		AMCR	American Crow	<i>Corvus brachyrhynchos</i>	3	100		Calling			
Chris Pepper	23-Sep	evw 158		BLPW	Blackpoll Warbler	<i>Setophaga striata</i>	2	0		Calling			
Chris Pepper	23-Sep	evw 158		YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1	0		Calling			
Chris Pepper	23-Sep	evw 158		CAGO	Canada Goose	<i>Branta canadensis</i>	3	100	SE	Passing	50	N	
Chris Pepper	23-Sep	evw 163	8:04 AM	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	3	0		Calling			
Chris Pepper	23-Sep	evw 163		BLPW	Blackpoll Warbler	<i>Setophaga striata</i>	2	0		Calling			
Chris Pepper	23-Sep	evw 163		BLJA	Blue Jay	<i>Cyanocitta cristata</i>	2	0		Calling			
Chris Pepper	23-Sep	evw 163		HETH	Hermit Thrush	<i>Catharus guttatus</i>	1	0		Calling			
Chris Pepper	23-Sep	evw 163		GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	2	0		Calling			
Chris Pepper	23-Sep	evw 163		BOCH	Boreal Chickadee	<i>Poecile hudsonicus</i>	2	0	NW	Calling			
Chris Pepper	23-Sep	evw 163		WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	4	0		Calling			
Chris Pepper	23-Sep	evw 163		AMRO	American Robin	<i>Turdus migratorius</i>	2	100		Calling			
Chris Pepper	23-Sep	evw 163		WWCR	White-winged Crossbill	<i>Loxia leucoptera</i>	10	50	SE	Passing	50	N	
Chris Pepper	23-Sep	evw 162	8:28 AM	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	2	0		Calling			
Chris Pepper	23-Sep	evw 162		BLPW	Blackpoll Warbler	<i>Setophaga striata</i>	1	0		Calling			
Chris Pepper	23-Sep	evw 162		CORA	Common Raven	<i>Corvus corax</i>	1	500		Calling			
Chris Pepper	23-Sep	evw 162		N/A	Warbler Sp.	N/A	2	50		Passing			

Table 11: 2023 Fall Migration Point Count Survey Results - Harbour Hills Wind Project

Observer	Date	Survey Location	Start Time	Species Code	Common Name	Scientific Name	#	Distance (m)	Bearing	Behaviour	Flyover Height (m)	Flight Direction	Comments
Chris Pepper	23-Sep	evw 162		WWCR	White-winged Crossbill	<i>Loxia leucoptera</i>	4	50		Calling			
Chris Pepper	23-Sep	evw 162		NOFL	Northern Flicker	<i>Colaptes auratus</i>	1	100		Calling			
Chris Pepper	23-Sep	evw 162		N/A	Woodpecked Sp.	N/A	1	100		Drumming			
Chris Pepper	23-Sep	evw 162		NOPA	Northern Parula	<i>Setophaga americana</i>	1	0		Calling			
Chris Pepper	23-Sep	evw 161	8:44 AM	BLPW	Blackpoll Warbler	<i>Setophaga striata</i>	2	0		Calling			
Chris Pepper	23-Sep	evw 161		YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1	0		Calling			
Chris Pepper	23-Sep	evw 161		NOFL	Northern Flicker	<i>Colaptes auratus</i>	1	50		Calling			
Chris Pepper	23-Sep	evw 160	8:59 AM	BLPW	Blackpoll Warbler	<i>Setophaga striata</i>	2	100		Calling			
Chris Pepper	23-Sep	evw 160		YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	2	0		Calling			
Chris Pepper	23-Sep	evw 160		GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	2	0		Calling			
Chris Pepper	23-Sep	evw 160		COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1	0		Calling			
Chris Pepper	23-Sep	evw 160		CAJA	Canada Jay	<i>Perisoreus canadensis</i>	3	0	E	Calling			
Chris Pepper	23-Sep	evw 160		AMRO	American Robin	<i>Turdus migratorius</i>	2	50	NW	Passing	50	S	
Chris Pepper	23-Sep	evw 160		AMRO	American Robin	<i>Turdus migratorius</i>	6	0	SE	Passing	50	NW	
Chris Pepper	23-Sep	evw 160		AMCR	American Crow	<i>Corvus brachyrhynchos</i>	1	100		Calling			
Chris Pepper	23-Sep	evw 160		NAWA	Nashville Warbler	<i>Leiothlypis ruficapilla</i>	1	0		Calling			
Chris Pepper	23-Sep	evw 160		DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1	0		Flushed			
Chris Pepper	23-Sep	evw 159	9:15 AM	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	3	0		Calling			
Chris Pepper	23-Sep	evw 159		BLPW	Blackpoll Warbler	<i>Setophaga striata</i>	2	0		Calling			
Chris Pepper	23-Sep	evw 159		HETH	Hermit Thrush	<i>Catharus guttatus</i>	1	0		Calling			
Chris Pepper	23-Sep	evw 159		ABDU	American Black Duck	<i>Anas rubripes</i>	4	na	Unknown	Foraging			
Chris Pepper	23-Sep	evw 159		GWTE	Green-winged Teal	<i>Anas crecca</i>	2	na	Unknown	Foraging			Feeding in river
Chris Pepper	23-Sep	evw 154	9:43 AM	PISI	Pine Siskin	<i>Spinus pinus</i>	8	0		Calling			Feeding in river
Chris Pepper	23-Sep	evw 154		DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1	0		Calling			
Chris Pepper	23-Sep	evw 154		MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	1	0		Foraging			
Chris Pepper	23-Sep	evw 154		NOPA	Northern Parula	<i>Setophaga americana</i>	1	0		Foraging			
Chris Pepper	23-Sep	evw 154		BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1	0		Foraging			
Chris Pepper	23-Sep	evw 154		BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1	0		Foraging			
Chris Pepper	23-Sep	evw 154		REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	1	0		Foraging			
Chris Pepper	23-Sep	evw 154		BCCH	Black-capped Chickadee	<i>Poecile atricapillus</i>	3	0		Foraging			
Chris Pepper	23-Sep	evw 154		GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	2	0		Calling			
Chris Pepper	23-Sep	evw 154		BLPW	Blackpoll Warbler	<i>Setophaga striata</i>	5	0		Foraging			
Chris Pepper	23-Sep	evw 154		YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	2	0		Calling			
Chris Pepper	23-Sep	evw 154		WWCR	White-winged Crossbill	<i>Loxia leucoptera</i>	2	0		Foraging			
Chris Pepper	23-Sep	evw 154		AMRO	American Robin	<i>Turdus migratorius</i>	1	0		Calling			
Chris Pepper	23-Sep	evw 154		COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	2	0		Calling			
Chris Pepper	23-Sep	evw 154		AMCR	American Crow	<i>Corvus brachyrhynchos</i>	1	0		Calling			
Chris Pepper	23-Sep	evw 155	9:57 AM	HAWO	Hairy Woodpecker	<i>Dryobates villosus</i>	1	0		Calling			
Chris Pepper	23-Sep	evw 155		BLPW	Blackpoll Warbler	<i>Setophaga striata</i>	4	0		Calling			
Chris Pepper	23-Sep	evw 155		YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1	0		Calling			
Chris Pepper	23-Sep	evw 156	10:13 AM	RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1	0		Calling			
Chris Pepper	23-Sep	evw 156		BLPW	Blackpoll Warbler	<i>Setophaga striata</i>	2	0		Calling			
Chris Pepper	23-Sep	evw 156		BLJA	Blue Jay	<i>Cyanocitta cristata</i>	1	0		Calling			

Table 11: 2023 Fall Migration Point Count Survey Results - Harbour Hills Wind Project

Observer	Date	Survey Location	Start Time	Species Code	Common Name	Scientific Name	#	Distance (m)	Bearing	Behaviour	Flyover Height (m)	Flight Direction	Comments
Chris Pepper	23-Sep	evw 156		AMRO	American Robin	<i>Turdus migratorius</i>	1	0		Calling			
Chris Pepper	23-Sep	evw 156		PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1	0		Calling			
Chris Pepper	23-Sep	evw 156		YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	2	0		Calling			
Chris Pepper	23-Sep	evw 156	10:22 AM	BLPW	Blackpoll Warbler	<i>Setophaga striata</i>	2	0		Calling			
Chris Pepper	23-Sep	evw 156		PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1	0		Calling			
Chris Pepper	23-Sep	evw 156		DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1	0		Calling			
Chris Pepper	23-Sep	evw 157	10:45 AM	BLPW	Blackpoll Warbler	<i>Setophaga striata</i>	2	0		Calling			
Chris Pepper	23-Sep	evw 157		YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	3	0		Calling			
Chris Pepper	23-Sep	evw 157		PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1	0		Calling			
Chris Pepper	23-Sep	evw 157		N/A	Sparrow Sp.	N/A	1	50		Flushed			Small sparrow species
Chris Pepper	23-Sep	evw 157		COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1	0		Calling			
Chris Pepper	02-Oct	evw 177	7:21 AM	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	2	0		Calling			
Chris Pepper	02-Oct	evw 177		PISI	Pine Siskin	<i>Spinus pinus</i>	40	0	E	Passing	-50	W	
Chris Pepper	02-Oct	evw 177		BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1	0		Foraging			
Chris Pepper	02-Oct	evw 177		DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	3	0		Calling			
Chris Pepper	02-Oct	evw 177		BLPW	Blackpoll Warbler	<i>Setophaga striata</i>	3	0		Calling			
Chris Pepper	02-Oct	evw 177		AMCR	American Crow	<i>Corvus brachyrhynchos</i>	2	100		Calling			
Chris Pepper	02-Oct	evw 177		GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	2	0		Calling			
Chris Pepper	02-Oct	evw 177		BCCH	Black-capped Chickadee	<i>Poecile atricapillus</i>	1	50		Calling			
Chris Pepper	02-Oct	evw 176	7:34 AM	BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1	50		Singing			
Chris Pepper	02-Oct	evw 176		PISI	Pine Siskin	<i>Spinus pinus</i>	25	0		Passing			
Chris Pepper	02-Oct	evw 176		BLPW	Blackpoll Warbler	<i>Setophaga striata</i>	2	0		Calling			
Chris Pepper	02-Oct	evw 176		YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1	0		Calling			
Chris Pepper	02-Oct	evw 176		HETH	Hermit Thrush	<i>Catharus guttatus</i>	2	0		Calling			
Chris Pepper	02-Oct	evw 176		AMRO	American Robin	<i>Turdus migratorius</i>	1	0		Calling			
Chris Pepper	02-Oct	evw 176		COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1	0		Calling			
Chris Pepper	02-Oct	evw 176		WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1	0		Calling			
Chris Pepper	02-Oct	evw 176		GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	2	0		Calling			
Chris Pepper	02-Oct	evw 176		CEDW	Cedar Waxwing	<i>Bombycilla cedrorum</i>	3	0		Calling			
Chris Pepper	02-Oct	evw 175	7:57 AM	BOCH	Boreal Chickadee	<i>Poecile hudsonicus</i>	1	50	NE	Calling			
Chris Pepper	02-Oct	evw 175		BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	2	0		Singing			
Chris Pepper	02-Oct	evw 175		PISI	Pine Siskin	<i>Spinus pinus</i>	5	0		Calling			
Chris Pepper	02-Oct	evw 175		GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	2	0		Calling			
Chris Pepper	02-Oct	evw 175		YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1	0		Calling			
Chris Pepper	02-Oct	evw 175		AMCR	American Crow	<i>Corvus brachyrhynchos</i>	1	0		Calling			
Chris Pepper	02-Oct	evw 175		HETH	Hermit Thrush	<i>Catharus guttatus</i>	1	0		Calling			
Chris Pepper	02-Oct	evw 175		BLPW	Blackpoll Warbler	<i>Setophaga striata</i>	3	0	SE	Passing	-50	N	
Chris Pepper	02-Oct	evw 175		WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	2	0		Calling			
Chris Pepper	02-Oct	evw 175		CAJA	Canada Jay	<i>Perisoreus canadensis</i>	2	0	NE	Calling			
Chris Pepper	02-Oct	evw 175		RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1	0		Calling			
Chris Pepper	02-Oct	evw 175		AMRO	American Robin	<i>Turdus migratorius</i>	1	0		Foraging			
Chris Pepper	02-Oct	evw 175		SWSP	Swamp Sparrow	<i>Melospiza georgiana</i>	1	0		Calling			

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Observer	Date	Survey Location	Start Time	Species Code	Common Name	Scientific Name	#	Distance (m)	Bearing	Behaviour	Flyover Height (m)	Flight Direction	Comments
Chris Pepper	02-Oct	evw 175		WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1	0		Calling			
Chris Pepper	02-Oct	evw 173	8:24 AM	SPGR	Spruce Grouse	<i>Canachites canadensis</i>	2	na	Unknown	on road shoulder			
Chris Pepper	02-Oct	evw 173		PISI	Pine Siskin	<i>Spinus pinus</i>	2	0		Calling			
Chris Pepper	02-Oct	evw 173		BCCH	Black-capped Chickadee	<i>Poecile atricapillus</i>	1	0		Calling			
Chris Pepper	02-Oct	evw 173		CAJA	Canada Jay	<i>Perisoreus canadensis</i>	1	0	SW	Calling			
Chris Pepper	02-Oct	evw 173		AMGO	American Goldfinch	<i>Spinus tristis</i>	1	0		Calling			
Chris Pepper	02-Oct	evw 173		CORA	Common Raven	<i>Corvus corax</i>	1	500		Calling			
Chris Pepper	02-Oct	evw 173		YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	3	50		Calling			
Chris Pepper	02-Oct	evw 173		BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1	100		Singing			
Chris Pepper	02-Oct	evw 173		PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1	0		Calling			
Chris Pepper	02-Oct	evw 173		DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1	0		Calling			
Chris Pepper	02-Oct	evw 174	8:39 AM	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	2	0		Calling			
Chris Pepper	02-Oct	evw 174		DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	2	0		Calling			
Chris Pepper	02-Oct	evw 174		BLPW	Blackpoll Warbler	<i>Setophaga striata</i>	2	0		Calling			
Chris Pepper	02-Oct	evw 174		SOSP	Song Sparrow	<i>Melospiza melodia</i>	1	0		Calling			
Chris Pepper	02-Oct	evw 174		PISI	Pine Siskin	<i>Spinus pinus</i>	5	0		Calling			
Chris Pepper	02-Oct	evw 174		CORA	Common Raven	<i>Corvus corax</i>	1	0		Calling			
Chris Pepper	02-Oct	evw 174		HETH	Hermit Thrush	<i>Catharus guttatus</i>	1	0		Calling			
Chris Pepper	02-Oct	evw 174		BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1	0		Calling			
Chris Pepper	02-Oct	evw 174		AMRO	American Robin	<i>Turdus migratorius</i>	2	100		Calling			
Chris Pepper	02-Oct	evw 174		WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1	100		Singing			
Chris Pepper	02-Oct	evw 174		YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	2	0		Calling			
Chris Pepper	02-Oct	evw 169	9:09 AM	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	2	0		Calling			
Chris Pepper	02-Oct	evw 169		BLJA	Blue Jay	<i>Cyanocitta cristata</i>	1	0		Calling			
Chris Pepper	02-Oct	evw 169		YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	2	0		Calling			
Chris Pepper	02-Oct	evw 169		PISI	Pine Siskin	<i>Spinus pinus</i>	2	0		Calling			
Chris Pepper	02-Oct	evw 170	9:39 AM	AMRO	American Robin	<i>Turdus migratorius</i>	2	0		Calling			
Chris Pepper	02-Oct	evw 170		PISI	Pine Siskin	<i>Spinus pinus</i>	10	0	SW	Passing	-50	NE	
Chris Pepper	02-Oct	evw 170		YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	2	0		Calling			
Chris Pepper	02-Oct	evw 170		BLPW	Blackpoll Warbler	<i>Setophaga striata</i>	2	0		Calling			
Chris Pepper	02-Oct	evw 170		CORA	Common Raven	<i>Corvus corax</i>	1	0		Calling			
Chris Pepper	02-Oct	evw 172	9:58 AM	HETH	Hermit Thrush	<i>Catharus guttatus</i>	1	0		Calling			
Chris Pepper	02-Oct	evw 172		PISI	Pine Siskin	<i>Spinus pinus</i>	2	0		Calling			
Chris Pepper	02-Oct	evw 172		PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1	0		Calling			
Chris Pepper	02-Oct	evw 172		SAVS	Savannah Sparrow	<i>Passerculus sandwichensis</i>	1	100		Flushed			Flushed off road 100m from waypoint
Chris Pepper	02-Oct	evw 172		CORA	Common Raven	<i>Corvus corax</i>	1	250		Calling			
Chris Pepper	02-Oct	evw 172		BLPW	Blackpoll Warbler	<i>Setophaga striata</i>	1	0		Calling			
Chris Pepper	02-Oct	evw 172		SPGR	Spruce Grouse	<i>Canachites canadensis</i>	1	na	Unknown	Flushed			
Chris Pepper	02-Oct	evw 172		BCCH	Black-capped Chickadee	<i>Poecile atricapillus</i>	1	50		Calling			
Chris Pepper	02-Oct	evw 172		YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1	0		Calling			
Chris Pepper	02-Oct	evw 172		PUFI	Purple Finch	<i>Haemorhous purpureus</i>	1	100	N	Calling			

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Observer	Date	Survey Location	Start Time	Species Code	Common Name	Scientific Name	#	Distance (m)	Bearing	Behaviour	Flyover Height (m)	Flight Direction	Comments
Chris Pepper	02-Oct	evw 171	10:15 AM	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1	50		Calling			
Chris Pepper	02-Oct	evw 171		YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1	0		Calling			
Chris Pepper	02-Oct	evw 171		BLPW	Blackpoll Warbler	<i>Setophaga striata</i>	1	0		Calling			
Chris Pepper	02-Oct	evw 171		PISI	Pine Siskin	<i>Spinus pinus</i>	2	0		Calling			
Chris Pepper	02-Oct	evw 171		AMRO	American Robin	<i>Turdus migratorius</i>	1	50		Calling			
Chris Pepper	02-Oct	evw 171		DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1	50		Calling			
Chris Pepper	02-Oct	evw 168	11:06 AM	PISI	Pine Siskin	<i>Spinus pinus</i>	2	50		Calling			
Chris Pepper	02-Oct	evw 168		PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1	0		Foraging			
Chris Pepper	02-Oct	evw 168		YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1	0		Calling			
Chris Pepper	02-Oct	evw 168		AMRO	American Robin	<i>Turdus migratorius</i>	2	0		Calling			
Chris Pepper	02-Oct	evw 168		BLPW	Blackpoll Warbler	<i>Setophaga striata</i>	1	0		Calling			
Chris Pepper	02-Oct	evw 168		GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	0		Calling			
Chris Pepper	02-Oct	evw 168		AMCR	American Crow	<i>Corvus brachyrhynchos</i>	1	0		Calling			
Chris Pepper	02-Oct	evw 167	11:25 AM	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1	0		Calling			
Chris Pepper	02-Oct	evw 167		BOCH	Boreal Chickadee	<i>Poecile hudsonicus</i>	5	0		Calling			
Chris Pepper	02-Oct	evw 167		BCCH	Black-capped Chickadee	<i>Poecile atricapillus</i>	2	0		Calling			
Chris Pepper	02-Oct	evw 167		GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	2	0		Calling			
Chris Pepper	02-Oct	evw 167		PISI	Pine Siskin	<i>Spinus pinus</i>	1	50		Calling			
Chris Pepper	02-Oct	evw 164	11:41 AM	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	1	100		Calling			
Chris Pepper	02-Oct	evw 164		PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1	0		Calling			
Chris Pepper	02-Oct	evw 164		AMRO	American Robin	<i>Turdus migratorius</i>	1	50		Calling			
Chris Pepper	25-Oct	evw 189	7:52 AM	CAGO	Canada Goose	<i>Branta canadensis</i>	9	50	NW	Passing	50	S	
Chris Pepper	25-Oct	evw 189		BCCH	Black-capped Chickadee	<i>Poecile atricapillus</i>	2	0		Calling			
Chris Pepper	25-Oct	evw 189		HAWO	Hairy Woodpecker	<i>Dryobates villosus</i>	1	50		Calling			
Chris Pepper	25-Oct	evw 189		AMCR	American Crow	<i>Corvus brachyrhynchos</i>	2	100		Calling			
Chris Pepper	25-Oct	evw 189		CORA	Common Raven	<i>Corvus corax</i>	1	50		Calling			
Chris Pepper	25-Oct	evw 189		GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	0		Calling			
Chris Pepper	25-Oct	evw 158	8:17 AM	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	2	0		Singing			
Chris Pepper	25-Oct	evw 158		GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	2	0		Calling			
Chris Pepper	25-Oct	evw 158		BLJA	Blue Jay	<i>Cyanocitta cristata</i>	1	100		Calling			
Chris Pepper	25-Oct	evw 158		HAWO	Hairy Woodpecker	<i>Dryobates villosus</i>	1	100		Calling			
Chris Pepper	25-Oct	evw 159	8:32 AM	PISI	Pine Siskin	<i>Spinus pinus</i>	2	100		Calling			
Chris Pepper	25-Oct	evw 159		GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	0		Calling			
Chris Pepper	25-Oct	evw 159		PIWO	Pileated Woodpecker	<i>Dryocopus pileatus</i>	1	100	E	Calling			
Chris Pepper	25-Oct	evw 159		WWCR	White-winged Crossbill	<i>Loxia leucoptera</i>	2	50		Calling			
Chris Pepper	25-Oct	evw 159		BCCH	Black-capped Chickadee	<i>Poecile atricapillus</i>	1	100		Calling			
Chris Pepper	25-Oct	evw 159		AMCR	American Crow	<i>Corvus brachyrhynchos</i>	1	250		Calling			
Chris Pepper	25-Oct	evw 159		AMRO	American Robin	<i>Turdus migratorius</i>	2	100		Calling			
Chris Pepper	25-Oct	evw 159		CAJA	Canada Jay	<i>Perisoreus canadensis</i>	1	100	SE	Calling			
Chris Pepper	25-Oct	evw 159		PUFI	Purple Finch	<i>Haemorhous purpureus</i>	3	50		Calling			
Chris Pepper	25-Oct	evw 160	8:46 AM	PUFI	Purple Finch	<i>Haemorhous purpureus</i>	2	0	W	Passing	50	E	
Chris Pepper	25-Oct	evw 160		PISI	Pine Siskin	<i>Spinus pinus</i>	2	0	W	Passing	50	E	
Chris Pepper	25-Oct	evw 160		HAWO	Hairy Woodpecker	<i>Dryobates villosus</i>	1	100		Calling			

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Observer	Date	Survey Location	Start Time	Species Code	Common Name	Scientific Name	#	Distance (m)	Bearing	Behaviour	Flyover Height (m)	Flight Direction	Comments
Chris Pepper	25-Oct	evw 160		CORA	Common Raven	<i>Corvus corax</i>	3	100		Calling			
Chris Pepper	25-Oct	evw 160		BOCH	Boreal Chickadee	<i>Poecile hudsonicus</i>	3	0	SW	Calling			
Chris Pepper	25-Oct	evw 160		GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	3	0		Calling			
Chris Pepper	25-Oct	evw 163	9:06 AM	BCCH	Black-capped Chickadee	<i>Poecile atricapillus</i>	2	0		Calling			
Chris Pepper	25-Oct	evw 163		PUFI	Purple Finch	<i>Haemorhous purpureus</i>	2	0		Calling			
Chris Pepper	25-Oct	evw 163		PISI	Pine Siskin	<i>Spinus pinus</i>	2	0	W	Passing	-50	E	
Chris Pepper	25-Oct	evw 163		CAJA	Canada Jay	<i>Perisoreus canadensis</i>	1	50	NE	Calling			
Chris Pepper	25-Oct	evw 163		WWCR	White-winged Crossbill	<i>Loxia leucoptera</i>	2	50	NE	Passing			
Chris Pepper	25-Oct	evw 162	9:24 AM	PISI	Pine Siskin	<i>Spinus pinus</i>	3	50	N	Passing	-50	W	
Chris Pepper	25-Oct	evw 162		PUFI	Purple Finch	<i>Haemorhous purpureus</i>	2	0		Calling			
Chris Pepper	25-Oct	evw 162		BOCH	Boreal Chickadee	<i>Poecile hudsonicus</i>	2	50	SE	Calling			
Chris Pepper	25-Oct	evw 162		AMGO	American Goldfinch	<i>Spinus tristis</i>	1	100		Calling			
Chris Pepper	25-Oct	evw 162		WWCR	White-winged Crossbill	<i>Loxia leucoptera</i>	3	0	NE	Passing	-50	SW	
Chris Pepper	25-Oct	evw 161	9:42 AM	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	3	0		Calling			
Chris Pepper	25-Oct	evw 161		PISI	Pine Siskin	<i>Spinus pinus</i>	2	0		Calling			
Chris Pepper	25-Oct	evw 161		CAJA	Canada Jay	<i>Perisoreus canadensis</i>	2	0	N	Passing			
Chris Pepper	25-Oct	evw 161		PUFI	Purple Finch	<i>Haemorhous purpureus</i>	1	0		Calling			
Chris Pepper	25-Oct	evw 154	10:05 AM	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	3	0		Calling			
Chris Pepper	25-Oct	evw 154		CORA	Common Raven	<i>Corvus corax</i>	1	0		Calling			
Chris Pepper	25-Oct	evw 154		PISI	Pine Siskin	<i>Spinus pinus</i>	2	0		Calling			
Chris Pepper	25-Oct	evw 154		WWCR	White-winged Crossbill	<i>Loxia leucoptera</i>	4	0		Calling			
Chris Pepper	25-Oct	evw 155	10:20 AM	BOCH	Boreal Chickadee	<i>Poecile hudsonicus</i>	2	0	N	Calling			
Chris Pepper	25-Oct	evw 155		GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	2	0		Calling			
Chris Pepper	25-Oct	evw 155		BCCH	Black-capped Chickadee	<i>Poecile atricapillus</i>	2	0		Calling			
Chris Pepper	25-Oct	evw 155		PISI	Pine Siskin	<i>Spinus pinus</i>	1	50		Calling			
Chris Pepper	25-Oct	evw 155		WWCR	White-winged Crossbill	<i>Loxia leucoptera</i>	2	50		Calling			
Chris Pepper	25-Oct	evw 155		WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1	0		Calling			
Chris Pepper	25-Oct	evw 155		BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1	0		Calling			
Chris Pepper	25-Oct	evw 155		PUFI	Purple Finch	<i>Haemorhous purpureus</i>	1	0	SW	Passing	-50	N	
Chris Pepper	25-Oct	evw 156	10:38 AM	PUFI	Purple Finch	<i>Haemorhous purpureus</i>	1	50		Calling			
Chris Pepper	25-Oct	evw 156		CORA	Common Raven	<i>Corvus corax</i>	12	250	N	Passing	-50	W	
Chris Pepper	25-Oct	evw 156		WWCR	White-winged Crossbill	<i>Loxia leucoptera</i>	1	100		Calling			
Chris Pepper	25-Oct	evw 156		PISI	Pine Siskin	<i>Spinus pinus</i>	2	50		Calling			
Chris Pepper	25-Oct	evw 156		PIWO	Pileated Woodpecker	<i>Dryocopus pileatus</i>	1	100	NE	Calling			
Chris Pepper	25-Oct	evw 153	10:55 AM	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	100		Calling			
Chris Pepper	25-Oct	evw 153		WWCR	White-winged Crossbill	<i>Loxia leucoptera</i>	3	50	NW	Passing	50	SE	
Chris Pepper	25-Oct	evw 153		PUFI	Purple Finch	<i>Haemorhous purpureus</i>	2	0	E	Passing	-50	W	
Chris Pepper	25-Oct	evw 153		BCCH	Black-capped Chickadee	<i>Poecile atricapillus</i>	2	0		Calling			
Chris Pepper	25-Oct	evw 153		YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1	0		Calling			
Chris Pepper	25-Oct	evw 153		CAJA	Canada Jay	<i>Perisoreus canadensis</i>	2	0	E	Calling			
Chris Pepper	25-Oct	evw 153		HAWO	Hairy Woodpecker	<i>Dryobates villosus</i>	1	100		Calling			
Chris Pepper	25-Oct	evw 157	11:15 AM	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	3	0		Calling			
Chris Pepper	25-Oct	evw 157		PUFI	Purple Finch	<i>Haemorhous purpureus</i>	1	50		Calling			

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Observer	Date	Survey Location	Start Time	Species Code	Common Name	Scientific Name	#	Distance (m)	Bearing	Behaviour	Flyover Height (m)	Flight Direction	Comments
Chris Pepper	25-Oct	evw 157		CORA	Common Raven	<i>Corvus corax</i>	1	100		Calling			
Chris Pepper	25-Oct	evw 157		NOFL	Northern Flicker	<i>Colaptes auratus</i>	1	na	Unknown	Flushed			
Chris Pepper	25-Oct	evw 157		DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	4	na	Unknown	Flushed			
Chris Pepper	27-Oct	evw 177	7:50 AM	CORA	Common Raven	<i>Corvus corax</i>	1	250		Calling			
Chris Pepper	27-Oct	evw 177		DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	2	0		Calling			
Chris Pepper	27-Oct	evw 177		WWCR	White-winged Crossbill	<i>Loxia leucoptera</i>	2	50		Calling			
Chris Pepper	27-Oct	evw 177		GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	4	0		Calling			
Chris Pepper	27-Oct	evw 177		BAEA	Bald Eagle	<i>Haliaeetus leucocephalus</i>	1	250	NE	Passing	-50	E	
Chris Pepper	27-Oct	evw 177		AMCR	American Crow	<i>Corvus brachyrhynchos</i>	2	250		Calling			
Chris Pepper	27-Oct	evw 177		AMRO	American Robin	<i>Turdus migratorius</i>	1	50		Calling			
Chris Pepper	27-Oct	evw 177		OCWA	Orange-crowned Warbler	<i>Leiothlypis celata</i>	1	na	Unknown	Foraging			
Chris Pepper	27-Oct	evw 177		BLJA	Blue Jay	<i>Cyanocitta cristata</i>	2	na	Unknown	Foraging			
Chris Pepper	27-Oct	evw 177		PISI	Pine Siskin	<i>Spinus pinus</i>	3	na	Unknown	Foraging			
Chris Pepper	27-Oct	evw 177		DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	2	na	Unknown	Foraging			
Chris Pepper	27-Oct	evw 177		AMRO	American Robin	<i>Turdus migratorius</i>	4	na	Unknown	Foraging			
Chris Pepper	27-Oct	evw 177		HETH	Hermit Thrush	<i>Catharus guttatus</i>	1	na	Unknown	Foraging			
Chris Pepper	27-Oct	evw 176	8:13 AM	WWCR	White-winged Crossbill	<i>Loxia leucoptera</i>	2	0		Calling			
Chris Pepper	27-Oct	evw 176		DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1	0		Calling			
Chris Pepper	27-Oct	evw 176		AMCR	American Crow	<i>Corvus brachyrhynchos</i>	2	0		Calling			
Chris Pepper	27-Oct	evw 176		YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1	0		Calling			
Chris Pepper	27-Oct	evw 176		GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	0		Calling			
Chris Pepper	27-Oct	evw 175	8:31 AM	PUFI	Purple Finch	<i>Haemorhous purpureus</i>	18	0		Foraging			Feeding on Mountain Ash
Chris Pepper	27-Oct	evw 175		PISI	Pine Siskin	<i>Spinus pinus</i>	160	0		Foraging			Large groups passing estimate
Chris Pepper	27-Oct	evw 175		AMRO	American Robin	<i>Turdus migratorius</i>	85	0		Foraging			Feeding on Mountain Ash
Chris Pepper	27-Oct	evw 175		CEDW	Cedar Waxwing	<i>Bombycilla cedrorum</i>	5	0		Foraging			
Chris Pepper	27-Oct	evw 175		WWCR	White-winged Crossbill	<i>Loxia leucoptera</i>	2	50		Calling			
Chris Pepper	27-Oct	evw 175		AMCR	American Crow	<i>Corvus brachyrhynchos</i>	1	250		Calling			
Chris Pepper	27-Oct	evw 175		SPGR	Spruce Grouse	<i>Canachites canadensis</i>	1	na	Unknown	Flushed			
Chris Pepper	27-Oct	evw 173	8:47 AM	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	2	0		Calling			
Chris Pepper	27-Oct	evw 173		WWCR	White-winged Crossbill	<i>Loxia leucoptera</i>	20	0		Calling			
Chris Pepper	27-Oct	evw 173		DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1	0		Calling			
Chris Pepper	27-Oct	evw 173		AMCR	American Crow	<i>Corvus brachyrhynchos</i>	2	0		Calling			
Chris Pepper	27-Oct	evw 173		PUFI	Purple Finch	<i>Haemorhous purpureus</i>	1	0		Calling			
Chris Pepper	27-Oct	evw 174	9:01 AM	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	2	0		Calling			
Chris Pepper	27-Oct	evw 174		DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1	0		Calling			
Chris Pepper	27-Oct	evw 174		WWCR	White-winged Crossbill	<i>Loxia leucoptera</i>	5	50		Calling			
Chris Pepper	27-Oct	evw 174		AMCR	American Crow	<i>Corvus brachyrhynchos</i>	2	500		Calling			
Chris Pepper	27-Oct	evw 169	9:33 AM	PUFI	Purple Finch	<i>Haemorhous purpureus</i>	3	50		Calling			
Chris Pepper	27-Oct	evw 169		GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	2	0		Calling			
Chris Pepper	27-Oct	evw 169		AMCR	American Crow	<i>Corvus brachyrhynchos</i>	2	500		Calling			
Chris Pepper	27-Oct	evw 169		AMRO	American Robin	<i>Turdus migratorius</i>	1	0		Calling			

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Observer	Date	Survey Location	Start Time	Species Code	Common Name	Scientific Name	#	Distance (m)	Bearing	Behaviour	Flyover Height (m)	Flight Direction	Comments
Chris Pepper	27-Oct	evw 171	9:51 AM	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	2	0		Calling			
Chris Pepper	27-Oct	evw 171		AMCR	American Crow	<i>Corvus brachyrhynchos</i>	2	500		Calling			
Chris Pepper	27-Oct	evw 171		PISI	Pine Siskin	<i>Spinus pinus</i>	2	0		Calling			
Chris Pepper	27-Oct	evw 171		WWCR	White-winged Crossbill	<i>Loxia leucoptera</i>	4	0		Calling			
Chris Pepper	27-Oct	evw 171		PUFI	Purple Finch	<i>Haemorhous purpureus</i>	2	0		Calling			
Chris Pepper	27-Oct	evw 170	10:12 AM	WWCR	White-winged Crossbill	<i>Loxia leucoptera</i>	2	0		Calling			
Chris Pepper	27-Oct	evw 170		GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	3	0		Calling			
Chris Pepper	27-Oct	evw 170		PUFI	Purple Finch	<i>Haemorhous purpureus</i>	4	0	NW	Passing			
Chris Pepper	27-Oct	evw 170		AMRO	American Robin	<i>Turdus migratorius</i>	4	0		Calling			
Chris Pepper	27-Oct	evw 170		CORA	Common Raven	<i>Corvus corax</i>	1	1000		Calling			
Chris Pepper	27-Oct	evw 170		AMCR	American Crow	<i>Corvus brachyrhynchos</i>	2	500		Calling			
Chris Pepper	27-Oct	evw 170		CAJA	Canada Jay	<i>Perisoreus canadensis</i>	2	50	E	Calling			
Chris Pepper	27-Oct	evw 172	10:30 AM	PISI	Pine Siskin	<i>Spinus pinus</i>	3	0	W	Passing	-50	NE	
Chris Pepper	27-Oct	evw 172		WWCR	White-winged Crossbill	<i>Loxia leucoptera</i>	1	100		Calling			
Chris Pepper	27-Oct	evw 172		AMRO	American Robin	<i>Turdus migratorius</i>	2	50		Calling			
Chris Pepper	27-Oct	evw 172		CORA	Common Raven	<i>Corvus corax</i>	1	500		Calling			
Chris Pepper	27-Oct	evw 172		PUFI	Purple Finch	<i>Haemorhous purpureus</i>	1	50		Calling			
Chris Pepper	27-Oct	evw 172		CAJA	Canada Jay	<i>Perisoreus canadensis</i>	3	0	S	Calling			
Chris Pepper	27-Oct	evw 164	11:16 AM	FISP	Field Sparrow	<i>Spizella pusilla</i>	1	0	N	Foraging			Uncommon vagrant, id pics
Chris Pepper	27-Oct	evw 164		SPGR	Spruce Grouse	<i>Canachites canadensis</i>	3	0		Foraging			
Chris Pepper	27-Oct	evw 164		PIWO	Pileated Woodpecker	<i>Dryocopus pileatus</i>	1	100		Calling			
Chris Pepper	27-Oct	evw 164		DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	2	0		Calling			
Chris Pepper	27-Oct	evw 164		AMRO	American Robin	<i>Turdus migratorius</i>	2	50		Calling			
Chris Pepper	27-Oct	evw 164		AMCR	American Crow	<i>Corvus brachyrhynchos</i>	3	500		Calling			
Chris Pepper	27-Oct	evw 164		PISI	Pine Siskin	<i>Spinus pinus</i>	5	50		Calling			
Chris Pepper	27-Oct	evw 167	11:32 AM	WWCR	White-winged Crossbill	<i>Loxia leucoptera</i>	3	50		Calling			
Chris Pepper	27-Oct	evw 167		CORA	Common Raven	<i>Corvus corax</i>	1	500		Calling			
Chris Pepper	27-Oct	evw 168	11:47 AM	BOCH	Boreal Chickadee	<i>Poecile hudsonicus</i>	1	50	NE	Calling			
Chris Pepper	27-Oct	evw 168		PISI	Pine Siskin	<i>Spinus pinus</i>	2	0	N	Passing	-50	SW	
Chris Pepper	30-Oct	evw 105	7:41 AM	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	2	0		Calling			
Chris Pepper	30-Oct	evw 106	7:53 AM	WWCR	White-winged Crossbill	<i>Loxia leucoptera</i>	1	0	SW	Passing	-50	NE	
Chris Pepper	30-Oct	evw 106		PIWO	Pileated Woodpecker	<i>Dryocopus pileatus</i>	1	250	N	Calling			
Chris Pepper	30-Oct	evw 106		WWCR	White-winged Crossbill	<i>Loxia leucoptera</i>	4	0	E	Passing	-50	W	
Chris Pepper	30-Oct	evw 106		PISI	Pine Siskin	<i>Spinus pinus</i>	1	0	SW	Passing	-50	NE	
Chris Pepper	30-Oct	evw 106		GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	0		Calling			
Chris Pepper	30-Oct	evw 107	8:05 AM	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	2	0		Calling			
Chris Pepper	30-Oct	evw 107		PISI	Pine Siskin	<i>Spinus pinus</i>	1	0	W	Passing	50	E	
Chris Pepper	30-Oct	evw 107		WWCR	White-winged Crossbill	<i>Loxia leucoptera</i>	2	0		Calling			
Chris Pepper	30-Oct	evw 107		BLJA	Blue Jay	<i>Cyanocitta cristata</i>	1	0		Calling			
Chris Pepper	30-Oct	evw 107		SPGR	Spruce Grouse	<i>Canachites canadensis</i>	3	na	Unknown	Flushed			
Chris Pepper	30-Oct	evw 110	8:19 AM	CORA	Common Raven	<i>Corvus corax</i>	1	250		Calling			
Chris Pepper	30-Oct	evw 110		PUFI	Purple Finch	<i>Haemorhous purpureus</i>	13	0	NW	Passing	-50	SE	

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Observer	Date	Survey Location	Start Time	Species Code	Common Name	Scientific Name	#	Distance (m)	Bearing	Behaviour	Flyover Height (m)	Flight Direction	Comments
Chris Pepper	30-Oct	evw 110		PISI	Pine Siskin	<i>Spinus pinus</i>	2	50		Calling			
Chris Pepper	30-Oct	evw 110		GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	0		Calling			
Chris Pepper	30-Oct	evw 111	8:34 AM	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	3	0		Calling			
Chris Pepper	30-Oct	evw 111		DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	3	0		Calling			
Chris Pepper	30-Oct	evw 111		RECR	Red Crossbill	<i>Loxia curvirostra</i>	2	0		Calling			1 adult, 1 heavily streaked juvenile. possibly nested in area
Chris Pepper	30-Oct	evw 111		PISI	Pine Siskin	<i>Spinus pinus</i>	25	0	N	Passing	-50	S	
Chris Pepper	30-Oct	evw 112	8:51 AM	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1	0		Calling			
Chris Pepper	30-Oct	evw 112		WWCR	White-winged Crossbill	<i>Loxia leucoptera</i>	5	50		Calling			
Chris Pepper	30-Oct	evw 112		PISI	Pine Siskin	<i>Spinus pinus</i>	2	50		Calling			
Chris Pepper	30-Oct	evw 112		PUFI	Purple Finch	<i>Haemorhous purpureus</i>	2	0		Calling			
Chris Pepper	30-Oct	evw 116	9:15 AM	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	2	100		Calling			
Chris Pepper	30-Oct	evw 116		GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	2	0		Calling			
Chris Pepper	30-Oct	evw 116		PISI	Pine Siskin	<i>Spinus pinus</i>	20	0	SE	Calling	50	NW	
Chris Pepper	30-Oct	evw 116		PUFI	Purple Finch	<i>Haemorhous purpureus</i>	2	0	SE	Passing	50	NW	
Chris Pepper	30-Oct	evw 116		WWCR	White-winged Crossbill	<i>Loxia leucoptera</i>	2	50		Calling			
Chris Pepper	30-Oct	evw 115	9:32 AM	BOCH	Boreal Chickadee	<i>Poecile hudsonicus</i>	1	50	E	Calling			
Chris Pepper	30-Oct	evw 115		PUFI	Purple Finch	<i>Haemorhous purpureus</i>	2	0		Calling			
Chris Pepper	30-Oct	evw 115		CORA	Common Raven	<i>Corvus corax</i>	1	500		Calling			
Chris Pepper	30-Oct	evw 115		PISI	Pine Siskin	<i>Spinus pinus</i>	2	0		Calling			
Chris Pepper	30-Oct	evw 114	9:47 AM	CAJA	Canada Jay	<i>Perisoreus canadensis</i>	1	0		Calling			
Chris Pepper	30-Oct	evw 114		PUFI	Purple Finch	<i>Haemorhous purpureus</i>	1	0		Calling			
Chris Pepper	30-Oct	evw 108	10:27 AM	PISI	Pine Siskin	<i>Spinus pinus</i>	2	0		Calling			
Chris Pepper	30-Oct	evw 109	10:44 AM	BCCH	Black-capped Chickadee	<i>Poecile atricapillus</i>	4	0		Calling			
Chris Pepper	30-Oct	evw 109		GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	0		Calling			
Chris Pepper	30-Oct	evw 109		NOSH	Northern Shrike	<i>Lanius borealis</i>	1	0		Calling			
Chris Pepper	30-Oct	evw 109		HAWO	Hairy Woodpecker	<i>Dryobates villosus</i>	1	50		Calling			
Chris Pepper	30-Oct	evw 109		PUFI	Purple Finch	<i>Haemorhous purpureus</i>	2	50		Calling			
Chris Pepper	30-Oct	evw 117	11:01 AM	WWCR	White-winged Crossbill	<i>Loxia leucoptera</i>	2	50		Calling			
Chris Pepper	30-Oct	evw 117		GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	0		Calling			
Chris Pepper	30-Oct	evw 118	11:14 AM	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	2	0		Calling			
Chris Pepper	30-Oct	evw 118		BLJA	Blue Jay	<i>Cyanocitta cristata</i>	1	0		Calling			
Chris Pepper	30-Oct	evw 118		PISI	Pine Siskin	<i>Spinus pinus</i>	1	0	W	Passing	-50	E	
Chris Pepper	30-Oct	evw 119	11:29 AM	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	3	0		Flushed			
Chris Pepper	30-Oct	evw 119		PISI	Pine Siskin	<i>Spinus pinus</i>	7	0	NW	Passing	-50	S	
Chris Pepper	30-Oct	evw 119		GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	4	0		Calling			
Chris Pepper	30-Oct	evw 120	11:48 AM	BCCH	Black-capped Chickadee	<i>Poecile atricapillus</i>	6	0		Calling			
Chris Pepper	30-Oct	evw 120		GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	2	0		Calling			
Chris Pepper	30-Oct	evw 120		DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1	0		Calling			
Chris Pepper	30-Oct	evw 122	12:09 PM	PUFI	Purple Finch	<i>Haemorhous purpureus</i>	2	50		Calling			
Chris Pepper	30-Oct	evw 122		PISI	Pine Siskin	<i>Spinus pinus</i>	1	50		Calling			

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Observer	Date	Survey Location	Start Time	Species Code	Common Name	Scientific Name	#	Distance (m)	Bearing	Behaviour	Flyover Height (m)	Flight Direction	Comments
Chris Pepper	30-Oct	evw 122		DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	2	0		Calling			
Chris Pepper	30-Oct	evw 121	12:23 PM	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	2	0		Calling			
Chris Pepper	05-Nov	evw 123	7:32 AM	WWCR	White-winged Crossbill	<i>Loxia leucoptera</i>	2	50		Calling			
Chris Pepper	05-Nov	evw 123		AMGO	American Goldfinch	<i>Spinus tristis</i>	2	0	N	Passing	-50	S	
Chris Pepper	05-Nov	evw 123		PUFI	Purple Finch	<i>Haemorhous purpureus</i>	1	50		Calling			
Chris Pepper	05-Nov	evw 123		PISI	Pine Siskin	<i>Spinus pinus</i>	2	0		Calling			
Chris Pepper	05-Nov	evw 123		SNBU	Snow Bunting	<i>Plectrophenax nivalis</i>	5	50		Flushed			
Chris Pepper	05-Nov	evw 124	7:55 AM	WWCR	White-winged Crossbill	<i>Loxia leucoptera</i>	12	50	NW	Passing	-50	E	
Chris Pepper	05-Nov	evw 124		GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	3	0		Calling			
Chris Pepper	05-Nov	evw 124		PUFI	Purple Finch	<i>Haemorhous purpureus</i>	1	50		Calling			
Chris Pepper	05-Nov	evw 124		CAJA	Canada Jay	<i>Perisoreus canadensis</i>	1	100	NE	Calling			
Chris Pepper	05-Nov	evw 124		PIWO	Pileated Woodpecker	<i>Dryocopus pileatus</i>	1	250	NE	Drumming			
Chris Pepper	05-Nov	evw 126	8:11 AM	WWCR	White-winged Crossbill	<i>Loxia leucoptera</i>	2	50	S	Passing	-50	SW	
Chris Pepper	05-Nov	evw 126		CORA	Common Raven	<i>Corvus corax</i>	1	100		Calling			
Chris Pepper	05-Nov	evw 126		PUFI	Purple Finch	<i>Haemorhous purpureus</i>	3	50		Passing			
Chris Pepper	05-Nov	evw 126		GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	2	0		Calling			
Chris Pepper	05-Nov	evw 126		PISI	Pine Siskin	<i>Spinus pinus</i>	2	0		Passing			
Chris Pepper	05-Nov	evw 126		PIWO	Pileated Woodpecker	<i>Dryocopus pileatus</i>	1	50	NW	Calling			
Chris Pepper	05-Nov	evw 125	8:36 AM	CORA	Common Raven	<i>Corvus corax</i>	1	500		Calling			
Chris Pepper	05-Nov	evw 125		RECR	Red Crossbill	<i>Loxia curvirostra</i>	1	100	NW	Singing			
Chris Pepper	05-Nov	evw 125		PISI	Pine Siskin	<i>Spinus pinus</i>	2	0	N	Passing	50	S	
Chris Pepper	05-Nov	evw 125		WWCR	White-winged Crossbill	<i>Loxia leucoptera</i>	2	100		Calling			
Chris Pepper	05-Nov	evw 125		GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	0		Calling			
Chris Pepper	05-Nov	evw 125		DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	2	0		Calling			
Chris Pepper	05-Nov	evw 127	8:54 AM	PUFI	Purple Finch	<i>Haemorhous purpureus</i>	2	100		Calling			
Chris Pepper	05-Nov	evw 127		WWCR	White-winged Crossbill	<i>Loxia leucoptera</i>	2	100		Calling			
Chris Pepper	05-Nov	evw 127		SNBU	Snow Bunting	<i>Plectrophenax nivalis</i>	3	0		Foraging			
Chris Pepper	05-Nov	evw 127		SPGR	Spruce Grouse	<i>Canachites canadensis</i>	1	na	Unknown	Flushed			
Chris Pepper	05-Nov	evw 128	9:12 AM	WWCR	White-winged Crossbill	<i>Loxia leucoptera</i>	11	0	SE	Passing	-50	S	
Chris Pepper	05-Nov	evw 128		DOWO	Downy Woodpecker	<i>Dryobates pubescens</i>	1	0	W	Passing	-50	E	
Chris Pepper	05-Nov	evw 128		PUFI	Purple Finch	<i>Haemorhous purpureus</i>	1	50		Calling			
Chris Pepper	05-Nov	evw 130	9:30 AM	WWCR	White-winged Crossbill	<i>Loxia leucoptera</i>	3	50		Calling			
Chris Pepper	05-Nov	evw 130		PISI	Pine Siskin	<i>Spinus pinus</i>	2	50		Calling			
Chris Pepper	05-Nov	evw 130		BBWO	Black-backed Woodpecker	<i>Picoides arcticus</i>	1	100	W	Calling			
Chris Pepper	05-Nov	evw 130		HAWO	Hairy Woodpecker	<i>Dryobates villosus</i>	1	100		Calling			
Chris Pepper	05-Nov	evw 130		AMRO	American Robin	<i>Turdus migratorius</i>	1	100		Calling			
Chris Pepper	05-Nov	evw 130		PUFI	Purple Finch	<i>Haemorhous purpureus</i>	1	100		Calling			
Chris Pepper	05-Nov	evw 130		CORA	Common Raven	<i>Corvus corax</i>	1	250		Calling			
Chris Pepper	05-Nov	evw 131	9:47 AM	PUFI	Purple Finch	<i>Haemorhous purpureus</i>	1	50		Calling			
Chris Pepper	05-Nov	evw 131		WWCR	White-winged Crossbill	<i>Loxia leucoptera</i>	2	50		Calling			
Chris Pepper	05-Nov	evw 131		GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	3	0		Calling			
Chris Pepper	05-Nov	evw 131		CAJA	Canada Jay	<i>Perisoreus canadensis</i>	2	0	E	Calling			
Chris Pepper	05-Nov	evw 131		SPGR	Spruce Grouse	<i>Canachites canadensis</i>	2	0		Flushed			

Table 11: 2023 Fall Migration Point Count Survey Results - Harbour Hills Wind Project

Observer	Date	Survey Location	Start Time	Species Code	Common Name	Scientific Name	#	Distance (m)	Bearing	Behaviour	Flyover Height (m)	Flight Direction	Comments
Chris Pepper	05-Nov	evw 132	10:05 AM	PUFI	Purple Finch	<i>Haemorhous purpureus</i>	2	0		Calling			
Chris Pepper	05-Nov	evw 132		WWCR	White-winged Crossbill	<i>Loxia leucoptera</i>	3	50		Calling			
Chris Pepper	05-Nov	evw 133	10:19 AM	PISI	Pine Siskin	<i>Spinus pinus</i>	3	50		Calling			
Chris Pepper	05-Nov	evw 133		WWCR	White-winged Crossbill	<i>Loxia leucoptera</i>	3	0		Calling			
Chris Pepper	05-Nov	evw 133		PIWO	Pileated Woodpecker	<i>Dryocopus pileatus</i>	1	0	NE	Calling			
Chris Pepper	05-Nov	evw 133		CORA	Common Raven	<i>Corvus corax</i>	2	0		Calling			
Chris Pepper	05-Nov	evw 135	10:38 AM	CORA	Common Raven	<i>Corvus corax</i>	2	100		Calling			
Chris Pepper	05-Nov	evw 135		PIWO	Pileated Woodpecker	<i>Dryocopus pileatus</i>	1	50	E	Calling			
Chris Pepper	05-Nov	evw 135		PISI	Pine Siskin	<i>Spinus pinus</i>	5	0		Calling			
Chris Pepper	05-Nov	evw 135		WWCR	White-winged Crossbill	<i>Loxia leucoptera</i>	3	0		Calling			
Chris Pepper	05-Nov	evw 135		HAWO	Hairy Woodpecker	<i>Dryobates villosus</i>	1	50		Calling			
Chris Pepper	05-Nov	evw 134	10:57 AM	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	2	0		Calling			
Chris Pepper	05-Nov	evw 134		PISI	Pine Siskin	<i>Spinus pinus</i>	2	0		Calling			
Chris Pepper	05-Nov	evw 134		PUFI	Purple Finch	<i>Haemorhous purpureus</i>	2	0		Calling			
Chris Pepper	05-Nov	evw 134		PIWO	Pileated Woodpecker	<i>Dryocopus pileatus</i>	1	0		Calling			
Chris Pepper	05-Nov	evw 134		WWCR	White-winged Crossbill	<i>Loxia leucoptera</i>	2	50		Calling			
Chris Pepper	05-Nov	evw 143	11:22 AM	CORA	Common Raven	<i>Corvus corax</i>	1	500		Calling			
Chris Pepper	05-Nov	evw 143		WWCR	White-winged Crossbill	<i>Loxia leucoptera</i>	3	50		Calling			
Chris Pepper	07-Nov	evw 147	7:42 AM	BCCH	Black-capped Chickadee	<i>Poecile atricapillus</i>	2	0		Calling			
Chris Pepper	07-Nov	evw 147		GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	0		Calling			
Chris Pepper	07-Nov	evw 147		WWCR	White-winged Crossbill	<i>Loxia leucoptera</i>	3	50		Calling			
Chris Pepper	07-Nov	evw 146	7:56 AM	WWCR	White-winged Crossbill	<i>Loxia leucoptera</i>	2	0		Calling			
Chris Pepper	07-Nov	evw 146		GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	2	0		Calling			
Chris Pepper	07-Nov	evw 146		PUFI	Purple Finch	<i>Haemorhous purpureus</i>	1	50		Calling			
Chris Pepper	07-Nov	evw 149	8:13 AM	SPGR	Spruce Grouse	<i>Canachites canadensis</i>	1	na	Unknown	Flushed			
Chris Pepper	07-Nov	evw 149		RUGR	Ruffed Grouse	<i>Bonasa umbellus</i>	1	na	Unknown	Flushed			
Chris Pepper	07-Nov	evw 149		GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	0		Calling			
Chris Pepper	07-Nov	evw 149		PUFI	Purple Finch	<i>Haemorhous purpureus</i>	1	50		Calling			
Chris Pepper	07-Nov	evw 149		PISI	Pine Siskin	<i>Spinus pinus</i>	2	100		Calling			
Chris Pepper	07-Nov	evw 148	8:28 AM	PISI	Pine Siskin	<i>Spinus pinus</i>	2	0	NW	Passing	50	E	
Chris Pepper	07-Nov	evw 145	8:46 AM	PISI	Pine Siskin	<i>Spinus pinus</i>	5	0		Calling			
Chris Pepper	07-Nov	evw 145		BCCH	Black-capped Chickadee	<i>Poecile atricapillus</i>	3	0		Calling			
Chris Pepper	07-Nov	evw 145		DOWO	Downy Woodpecker	<i>Dryobates pubescens</i>	1	0		Calling			
Chris Pepper	07-Nov	evw 145		PUFI	Purple Finch	<i>Haemorhous purpureus</i>	1	0		Calling			
Chris Pepper	07-Nov	evw 145		PIWO	Pileated Woodpecker	<i>Dryocopus pileatus</i>	1	50	N	Calling			
Chris Pepper	07-Nov	evw 145		CORA	Common Raven	<i>Corvus corax</i>	1	0		Calling			
Chris Pepper	07-Nov	evw 145		GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	0		Calling			
Chris Pepper	07-Nov	evw 144	9:03 AM	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	1	500		Calling			
Chris Pepper	07-Nov	evw 144		PUFI	Purple Finch	<i>Haemorhous purpureus</i>	1	0	S	Passing	-50	N	
Chris Pepper	07-Nov	evw 144		HAWO	Hairy Woodpecker	<i>Dryobates villosus</i>	1	100		Calling			
Chris Pepper	07-Nov	evw 144		CAJA	Canada Jay	<i>Perisoreus canadensis</i>	2	50	SW	Calling			
Chris Pepper	07-Nov	evw 144		PISI	Pine Siskin	<i>Spinus pinus</i>	2	50		Calling			
Chris Pepper	07-Nov	evw 150	9:19 AM	PISI	Pine Siskin	<i>Spinus pinus</i>	3	0		Calling			

Table 11: 2023 Fall Migration Point Count Survey Results - Harbour Hills Wind Project

Observer	Date	Survey Location	Start Time	Species Code	Common Name	Scientific Name	#	Distance (m)	Bearing	Behaviour	Flyover Height (m)	Flight Direction	Comments
Chris Pepper	07-Nov	evw 151	9:34 AM	WWCR	White-winged Crossbill	<i>Loxia leucoptera</i>	3	0	E	Passing	50	NW	
Chris Pepper	07-Nov	evw 151		PISI	Pine Siskin	<i>Spinus pinus</i>	1	50		Calling			
Chris Pepper	07-Nov	evw 136	9:49 AM	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	3	0		Calling			
Chris Pepper	07-Nov	evw 136		WWCR	White-winged Crossbill	<i>Loxia leucoptera</i>	8	50		Calling			
Chris Pepper	07-Nov	evw 137	10:04 AM	PISI	Pine Siskin	<i>Spinus pinus</i>	2	50		Calling			
Chris Pepper	07-Nov	evw 137		BCCH	Black-capped Chickadee	<i>Poecile atricapillus</i>	2	0		Calling			
Chris Pepper	07-Nov	evw 137		RECR	Red Crossbill	<i>Loxia curvirostra</i>	1	50	E	Calling			
Chris Pepper	07-Nov	evw 137		GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	2	0		Calling			
Chris Pepper	07-Nov	evw 138	10:19 AM	N/A	N/A	N/A	0						No birds observed
Chris Pepper	07-Nov	evw 139	10:33 AM	WWCR	White-winged Crossbill	<i>Loxia leucoptera</i>	1	100		Calling			
Chris Pepper	07-Nov	evw 140	10:50 AM	WWCR	White-winged Crossbill	<i>Loxia leucoptera</i>	5	0		Calling			
Chris Pepper	07-Nov	evw 140		HAWO	Hairy Woodpecker	<i>Dryobates villosus</i>	1	50		Calling			
Chris Pepper	07-Nov	evw 141	11:09 AM	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>							
Chris Pepper	07-Nov	evw 142	11:26 AM	N/A	N/A	N/A	0						No birds observed
Chris Pepper	07-Nov	evw 152	11:40 AM	N/A	N/A	N/A	0						No birds observed

Table 12: 2023 Fall Migration Point Count Survey Results Summary - Harbour Hills Wind Project

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Common Name	Scientific Name	SARA Status	COSEWIC Status	ESA Status	NS S-Rank	Number Observed
American Black Duck	<i>Anas rubripes</i>	-	-	-	S5B,S5N	4
American Crow	<i>Corvus brachyrhynchos</i>	-	-	-	S5	42
American Goldfinch	<i>Spinus tristis</i>	-	-	-	S5	6
American Redstart	<i>Setophaga ruticilla</i>	-	-	-	S5B	9
American Robin	<i>Turdus migratorius</i>	-	-	-	S5B,S5N	139
Bald Eagle	<i>Haliaeetus leucocephalus</i>	-	Not at Risk	-	S5?	1
Bay-breasted Warbler	<i>Setophaga castanea</i>	-	-	-	S4B	1
Black-and-white Warbler	<i>Mniotilta varia</i>	-	-	-	S5B	19
Black-backed Woodpecker	<i>Picoides arcticus</i>	-	-	-	S3S4	1
Blackburnian Warbler	<i>Setophaga fusca</i>	-	-	-	S5B	4
Black-capped Chickadee	<i>Poecile atricapillus</i>	-	-	-	S5	63
Blackpoll Warbler	<i>Setophaga striata</i>	-	-	-	S3?B,S5M	64
Black-throated Green Warbler	<i>Setophaga virens</i>	-	-	-	S4B	15
Blue Jay	<i>Cyanocitta cristata</i>	-	-	-	S5	26
Blue-headed Vireo	<i>Vireo solitarius</i>	-	-	-	S5B	20
Boreal Chickadee	<i>Poecile hudsonicus</i>	-	-	-	S3	21
Broad-winged Hawk	<i>Buteo platypterus</i>	-	-	-	S5?B	1
Canada Goose	<i>Branta canadensis</i>	-	-	-	S5B,S5N	15
Canada Jay	<i>Perisoreus canadensis</i>	-	-	-	S3	32
Canada Warbler	<i>Cardellina canadensis</i>	Threatened	Special Concern	Endangered	S2S3B	1
Cape May Warbler	<i>Setophaga tigrina</i>	-	-	-	S3S4B,S4M	1
Cedar Waxwing	<i>Bombycilla cedrorum</i>	-	-	-	S5B	32
Common Loon	<i>Gavia immer</i>	-	Not at Risk	-	S4B,S4N	2
Common Raven	<i>Corvus corax</i>	-	-	-	S4	42
Common Yellowthroat	<i>Geothlypis trichas</i>	-	-	-	S5B	48
Dark-eyed Junco	<i>Junco hyemalis</i>	-	-	-	S5	62
Downy Woodpecker	<i>Dryobates pubescens</i>	-	-	-	S5	3
Eastern Wood-Pewee	<i>Contopus virens</i>	Special Concern	Special Concern	Vulnerable	S3S4B	1
Field Sparrow	<i>Spizella pusilla</i>	-	-	-	SNA	1
Golden-crowned Kinglet	<i>Regulus satrapa</i>	-	-	-	S5	128
Green-winged Teal	<i>Anas crecca</i>	-	-	-	S4B	2
Hairy Woodpecker	<i>Dryobates villosus</i>	-	-	-	S5	14
Hermit Thrush	<i>Catharus guttatus</i>	-	-	-	S5B	19

Table 12: 2023 Fall Migration Point Count Survey Results Summary - Harbour Hills Wind Project

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Common Name	Scientific Name	SARA Status	COSEWIC Status	ESA Status	NS S-Rank	Number Observed
Least Flycatcher	<i>Empidonax minimus</i>	-	-	-	S5B	1
Lincoln's Sparrow	<i>Melospiza lincolni</i>	-	-	-	S4B	1
Magnolia Warbler	<i>Setophaga magnolia</i>	-	-	-	S4S5B	12
Mourning Warbler	<i>Geothlypis philadelphia</i>	-	-	-	S4B	3
Nashville Warbler	<i>Leiothlypis ruficapilla</i>	-	-	-	S4B,S5M	6
Northern Flicker	<i>Colaptes auratus</i>	-	-	-	S5B	16
Northern Parula	<i>Setophaga americana</i>	-	-	-	S5B	4
Northern Shrike	<i>Lanius borealis</i>	-	-	-	S3N	1
Orange-crowned Warbler	<i>Leiothlypis celata</i>	-	-	-	S3S4M	1
Osprey	<i>Pandion haliaetus</i>	-	-	-	S4B	1
Palm Warbler	<i>Setophaga palmarum</i>	-	-	-	S5B	29
Pileated Woodpecker	<i>Dryocopus pileatus</i>	-	-	-	S5	15
Pine Siskin	<i>Spinus pinus</i>	-	-	-	S4	394
Purple Finch	<i>Haemorhous purpureus</i>	-	-	-	S5B,S4N	94
Red Crossbill	<i>Loxia curvirostra</i>	-	-	-	S4	11
Red-breasted Nuthatch	<i>Sitta canadensis</i>	-	-	-	S5	1
Red-eyed Vireo	<i>Vireo olivaceus</i>	-	-	-	S5B	12
Ruby-crowned Kinglet	<i>Corthylio calendula</i>	-	-	-	S4B,S5M	5
Ruby-throated Hummingbird	<i>Archilochus colubris</i>	-	-	-	S5B	1
Ruffed Grouse	<i>Bonasa umbellus</i>	-	-	-	S5	1
Savannah Sparrow	<i>Passerculus sandwichensis</i>	-	-	-	S4B,S5M	4
Snow Bunting	<i>Plectrophenax nivalis</i>	-	-	-	S4N	8
Song Sparrow	<i>Melospiza melodia</i>	-	-	-	S5B	2
Spruce Grouse	<i>Canachites canadensis</i>	-	-	-	S4	18
Swamp Sparrow	<i>Melospiza georgiana</i>	-	-	-	S5B	7
Whimbrel	<i>Numenius phaeopus</i>	-	-	-	S2M	1
White-crowned Sparrow	<i>Zonotrichia leucophrys</i>	-	-	-	SUM	1
White-throated Sparrow	<i>Zonotrichia albicollis</i>	-	-	-	S4S5B,S5M	25
White-winged Crossbill	<i>Loxia leucoptera</i>	-	-	-	S4S5	204
Winter Wren	<i>Troglodytes hiemalis</i>	-	-	-	S5B	1
Yellow Warbler	<i>Setophaga petechia</i>	-	-	-	S5B	2
Yellow-rumped Warbler	<i>Setophaga coronata</i>	-	-	-	S5B	58
Blackbird Sp.	N/A	N/A	N/A	N/A	N/A	1

Table 12: 2023 Fall Migration Point Count Survey Results Summary - Harbour Hills Wind Project

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Common Name	Scientific Name	SARA Status	COSEWIC Status	ESA Status	NS S-Rank	Number Observed
Sparrow Sp.	N/A	N/A	N/A	N/A	N/A	1
Warbler Sp.	N/A	N/A	N/A	N/A	N/A	52
Woodpecker Sp.	N/A	N/A	N/A	N/A	N/A	4

Table 13: 2023 Fall Migration Diurnal Watch Count Survey Results - Harbour Hills Wind Project

Observer	Date	Survey Location	Start Time	Species Code	Common Name	Scientific Name	#	Distance (m)	Bearing	Behaviour	Flyover Height (m)	Flight Direction	Comments
Chris Pepper	31-Aug-23	evw hawk 13	12:55 PM	CORA	Common Raven	<i>Corvus corax</i>	1	1000	N	Flyover	-50	W	
Chris Pepper	31-Aug-23	evw hawk 13	1:25 AM	N/A	N/A	N/A	0						No birds observed
Chris Pepper	22-Sep-23	evw hawk 14	11:55 AM	SSHA	Sharp-shinned Hawk	<i>Accipiter striatus</i>	1	1000	NW	Soaring	250-500	W	
Chris Pepper	22-Sep-23	evw hawk 14		BWHA	Broad-winged Hawk	<i>Buteo platypterus</i>	1	1000	NW	Soaring	250-500	W	
Chris Pepper	22-Sep-23	evw hawk 14	12:25 PM	N/A	Raptor Sp.	N/A	1	2000	NW	Soaring	500	N/A	
Chris Pepper	22-Sep-23	evw hawk 14		N/A	Passerine Sp.	N/A	1	250	NW	Passing	50	SW	
Chris Pepper	22-Sep-23	evw hawk 14	12:55 PM	N/A	Passerine Sp.	N/A	1	250	NW	Passing	50	SW	
Chris Pepper	22-Sep-23	evw hawk 14		N/A	Passerine Sp.	N/A	1	500	NW	Passing	50	NW	
Chris Pepper	22-Sep-23	evw hawk 14		BAEA	Bald Eagle	<i>Haliaeetus leucocephalus</i>	1	3000	NW	Soaring	100	N/A	
Chris Pepper	22-Sep-23	evw hawk 14	1:25 AM	RTHA	Red-tailed Hawk	<i>Buteo jamaicensis</i>	1	2000	NW	Soaring	100-250	N/A	Looked to be actively hunting
Chris Pepper	22-Sep-23	evw hawk 14		BAEA	Bald Eagle	<i>Haliaeetus leucocephalus</i>	1	2000	NW	Soaring	250	N/A	
Chris Pepper	22-Sep-23	evw hawk 14		YBSA	Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>	1	100	NW	Passing	-50	SW	
Chris Pepper	22-Sep-23	evw hawk 14		BAEA	Bald Eagle	<i>Haliaeetus leucocephalus</i>	1	250	W	Soaring	100	S	
Chris Pepper	22-Sep-23	evw hawk 14	1:55 AM	SSHA	Sharp-shinned Hawk	<i>Accipiter striatus</i>	1	500	NW	Soaring	250	S	
Chris Pepper	22-Sep-23	evw hawk 14		SSHA	Sharp-shinned Hawk	<i>Accipiter striatus</i>	1	1000	NW	Soaring	250	N/A	Lost bird before seeing direction of travel
Chris Pepper	22-Sep-23	evw hawk 14	2:25 AM	N/A	Passerine Sp.	N/A	1	250	NW	Passing	50		
Chris Pepper	22-Sep-23	evw hawk 14		CORA	Common Raven	<i>Corvus corax</i>	1	250	NW	Passing	100		
Chris Pepper	23-Sep-23	evw hawk 4	1:25 AM	RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1	0		Calling			
Chris Pepper	23-Sep-23	evw hawk 4		BAEA	Bald Eagle	<i>Haliaeetus leucocephalus</i>	2	500	NE	Passing	50-100	W	
Chris Pepper	23-Sep-23	evw hawk 4		N/A	Warbler Sp.	N/A	1	50	NW	Passing	-50	S	
Chris Pepper	23-Sep-23	evw hawk 4		BLPW	Blackpoll Warbler	<i>Setophaga striata</i>	1	50	NE	Passing	-50	SE	
Chris Pepper	23-Sep-23	evw hawk 4	1:55 AM	N/A	Passerine Sp.	N/A	1	250	NE	Passing	-50	SW	
Chris Pepper	23-Sep-23	evw hawk 4	2:25 AM	N/A	Passerine Sp.	N/A	1	500	NE	Passing	-50	N	
Chris Pepper	23-Sep-23	evw hawk 4		N/A	Passerine Sp.	N/A	3	250	NE	Passing	-50	SW	
Chris Pepper	23-Sep-23	evw hawk 4		AMRO	American Robin	<i>Turdus migratorius</i>	1	50	NE	Passing	-50	SW	
Chris Pepper	23-Sep-23	evw hawk 4		N/A	Passerine Sp.	N/A	1	100	N	Passing	-50	S	
Chris Pepper	23-Sep-23	evw hawk 4	2:55 AM	N/A	Warbler Sp.	N/A	1	50	NE	Passing	-50	W	
Chris Pepper	23-Sep-23	evw hawk 4		N/A	Passerine Sp.	N/A	1	50	NE	Passing	-50	SE	
Chris Pepper	27-Oct-23	evw hawk 3	12:30 PM	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	3	250	SE	Passing	-50	N	
Chris Pepper	27-Oct-23	evw hawk 3		AMCR	American Crow	<i>Corvus brachyrhynchos</i>	2	500	SE	Passing	-50	N	
Chris Pepper	27-Oct-23	evw hawk 3	1:00 AM	PISI	Pine Siskin	<i>Spinus pinus</i>	5	0	E	Passing	-50	W	
Chris Pepper	27-Oct-23	evw hawk 3	1:30 AM	N/A	N/A	N/A	0						No birds observed
Chris Pepper	27-Oct-23	evw hawk 3		WWCR	White-winged Crossbill	<i>Loxia leucoptera</i>	6	50	W	Passing	-50	E	
Chris Pepper	27-Oct-23	evw hawk 3	2:00 AM	N/A	N/A	N/A	0						No birds observed
Chris Pepper	30-Oct-23	evw hawk 14	1:00 AM	AMRO	American Robin	<i>Turdus migratorius</i>	3	250	NW	Passing	50	N	
Chris Pepper	30-Oct-23	evw hawk 14		BAEA	Bald Eagle	<i>Haliaeetus leucocephalus</i>	1	3000	NW	Passing	100	N/A	
Chris Pepper	30-Oct-23	evw hawk 14	1:30 AM	BAEA	Bald Eagle	<i>Haliaeetus leucocephalus</i>	1	2000	NW	Soaring	100	N/A	
Chris Pepper	30-Oct-23	evw hawk 14	2:00 AM	N/A	Raptor Sp.	N/A	1	3000	NW	Soaring	500	N/A	
Chris Pepper	30-Oct-23	evw hawk 14		AMKE	American Kestrel	<i>Falco sparverius</i>	1	1000	NW	Passing	100-0	S	stooped into woods
Chris Pepper	30-Oct-23	evw hawk 14		WWCR	White-winged Crossbill	<i>Loxia leucoptera</i>	1	0	N	Passing	50	SE	
Chris Pepper	30-Oct-23	evw hawk 14	2:30 AM	BAEA	Bald Eagle	<i>Haliaeetus leucocephalus</i>	2	1000	NW	Soaring	100-250	SW	
Chris Pepper	30-Oct-23	evw hawk 14		CORA	Common Raven	<i>Corvus corax</i>	1	50	E	Passing	50	N	
Chris Pepper	30-Oct-23	evw hawk 14	3:00 AM	BAEA	Bald Eagle	<i>Haliaeetus leucocephalus</i>	1	2000	NW	Soaring	250	N/A	
Chris Pepper	30-Oct-23	evw hawk 14	3:30 AM	N/A	N/A	N/A	0						No birds observed
Chris Pepper	5-Nov-23	evw hawk 14	11:50 AM	WWCR	White-winged Crossbill	<i>Loxia leucoptera</i>	10	250	NW	Passing	-50	W	
Chris Pepper	5-Nov-23	evw hawk 14		BAEA	Bald Eagle	<i>Haliaeetus leucocephalus</i>	1	1000	NW	Soaring	100	N/A	
Chris Pepper	5-Nov-23	evw hawk 14	12:20 PM	N/A	N/A	N/A	0						No birds observed
Chris Pepper	7-Nov-23	evw hawk 14	12:00 PM	N/A	N/A	N/A	0						No birds observed
Chris Pepper	7-Nov-23	evw hawk 14	12:30 PM	WWCR	White-winged Crossbill	<i>Loxia leucoptera</i>	5	50	NW	Passing	50	W	
Chris Pepper	7-Nov-23	evw hawk 14		PISI	Pine Siskin	<i>Spinus pinus</i>	12	250	NW	Passing	50	SW	

Table 14: 2023 Fall Migration Diurnal Watch Count Survey Results Summary - Harbour Hills Wind Project

Project # 25-11682

Common Name	Scientific Name	SARA Status	COSEWIC Status	ESA Status	NS S-Rank	Number Observed
American Crow	<i>Corvus brachyrhynchos</i>	-	-	-	S5	5
American Kestrel	<i>Falco sparverius</i>	-	-	-	S3B,S4M	1
American Robin	<i>Turdus migratorius</i>	-	-	-	S5B,S5N	4
Bald Eagle	<i>Haliaeetus leucocephalus</i>	-	Not at Risk	-	S5?	11
Blackpoll Warbler	<i>Setophaga striata</i>	-	-	-	S3?B,S5M	1
Broad-winged Hawk	<i>Buteo platypterus</i>	-	-	-	S5?B	1
Common Raven	<i>Corvus corax</i>	-	-	-	S4	3
Pine Siskin	<i>Spinus pinus</i>	-	-	-	S4	17
Red-tailed Hawk	<i>Buteo jamaicensis</i>	-	Not at Risk	-	S4	1
Ruby-crowned Kinglet	<i>Corthylio calendula</i>	-	-	-	S4B,S5M	1
Sharp-shinned Hawk	<i>Accipiter striatus</i>	-	Not at Risk	-	S4	3
White-winged Crossbill	<i>Loxia leucoptera</i>	-	-	-	S4S5	22
Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>	-	-	-	S5B	1
Passerine Sp.	N/A	N/A	N/A	N/A	N/A	11
Warbler Sp.	N/A	N/A	N/A	N/A	N/A	2

Table 15: 2023 to 2026 Avian Incidental Observations - Harbour Hills Wind Project

Date and Time	Observer	Survey Type	Common Name	Scientific Name	#	Distance (m)	Direction	Seen or Heard	Within or Near Wetland?	Notes
2026-02-18, 2:27 p.m.	BF	PGI/Winter Tracking	Pine Grosbeak	<i>Pinicola enucleator</i>	6	5		Seen,Heard		2 males 5 females. Mixedwood forest. Foraging.
2026-02-04, 10:56 a.m.	RK, LR	PGI/Winter Tracking	Pine Grosbeak	<i>Pinicola enucleator</i>	1	15	N	Heard		Heard just off edge of road
2026-02-04, 9:11 a.m.	RK, LR	PGI/Winter Tracking	Pine Grosbeak	<i>Pinicola enucleator</i>	4	5	NE	Seen		4 just off road eating cones in fir & BS
2025-12-11, 10:31 a.m.	RM, SC	Wetland/Watercourse Delineation	Evening Grosbeak	<i>Coccothraustes vespertinus</i>	27	30	W	Seen,Heard	Near Wetland	Flock flyover, calling, 0-50m height
2025-12-11, 10:08 a.m.	RM, SC	Wetland/Watercourse Delineation	Redpoll	<i>Acanthis flammea</i>	7	15	NE	Seen,Heard		Group flying at a height of 0-50m, calling, travelling NE
2025-12-11, 7:58 a.m.	RM, SC	Wetland/Watercourse Delineation	Redpoll	<i>Acanthis flammea</i>	2	5		Seen		Pair perched in shrubs along trail. Flew right up to us
2025-12-10, 1:59 p.m.	RM, SC	Wetland/Watercourse Delineation	Canada Jay	<i>Perisoreus canadensis</i>	4					4 CAJA calling, flying around treetops. One AMRO flyover (0-50m) travelling north
2025-12-10, 1:59 p.m.	RM, SC	Wetland/Watercourse Delineation	American Robin	<i>Turdus migratorius</i>	1	25		Seen,Heard		4 CAJA calling, flying around treetops. One AMRO flyover (0-50m) travelling north
2025-12-10, 1:03 p.m.	RM, SC	Wetland/Watercourse Delineation	Canada Jay	<i>Perisoreus canadensis</i>	2	50	S	Heard		Calling from the south
2025-12-09, 3:02 p.m.	RM, SC	Wetland/Watercourse Delineation	Evening Grosbeak	<i>Coccothraustes vespertinus</i>	2	10		Seen,Heard	No	Pair flying over while calling. Travelling west, height 0-50m.
2025-11-25, 10:38 a.m.	SC, DS	Wetland/Watercourse Delineation	Canada Jay	<i>Perisoreus canadensis</i>	2	100	NE	Heard		Heard two individuals calling
2025-11-25, 9:23 a.m.	SC, DS	Wetland/Watercourse Delineation	Pileated Woodpecker	<i>Dryocopus pileatus</i>	1	1		Seen		No birds actually observed but evidence of a nesting cavity was found in a snag within suitable habitat.
2025-12-04, 10:09 a.m.	BF	Wetland/Watercourse Delineation	Redpoll	<i>Acanthis flammea</i>	5	25		Heard		Small flock flyover
2025-09-03, 8:54 a.m.	PS	Wetland/Watercourse Delineation	Canada Jay	<i>Perisoreus canadensis</i>	2	50	North	Heard,Seen	Near Wetland	Observed from Barrens(in AA) but Canada Jay was seen in the tree line of a treed swamp (outside AA). Flew from tree top to tree top while singing.
2025-08-20, 9:43 a.m.	OM	Wetland/Watercourse Delineation	Canada Jay	<i>Perisoreus canadensis</i>	1	50	SE	Heard	Within Wetland	Shrubby wetland. Possibly disturbed balsam fir red maple trees
2025-07-22, 12:09 p.m.	AM, UM	Wetland/Watercourse Delineation	Boreal Chickadee	<i>Poecile hudsonicus</i>	1	25		Heard		Near the edge of a treed swamp.
2025-05-28, 8:21 a.m.	RK	Wetland/Watercourse Delineation	Canada Jay	<i>Perisoreus canadensis</i>	2	15	SE	Seen		Jumping from tree to tree roadside
2025-08-01, 9:41 a.m.	AM	Wetland/Watercourse Delineation	Olive-sided Flycatcher	<i>Contopus cooperi</i>	1	50	E	Heard	Within Wetland	Wetland mature treed/shrubed swamp
2025-07-22, 10:31 a.m.	AM, UM	Wetland/Watercourse Delineation	Olive-sided Flycatcher	<i>Contopus cooperi</i>	1	30	NW	Heard	Near Wetland	Softwood treed swamp, near a lake, heard within boundary of the wetland likely
2025-07-23, 10:06 a.m.	AM, UM	Wetland/Watercourse Delineation	Olive-sided Flycatcher	<i>Contopus cooperi</i>	1	40	164deg South	Heard	Within Wetland	Soft wood wetland , near water course
2025-07-18, 8:06 a.m.	RK	Botany	Olive-sided Flycatcher	<i>Contopus cooperi</i>	1	5	NW	Seen,Heard	Within Wetland	Dense shrubby softwood wetland. Roadside wetland. Shorter canopied WC2
2025-07-03, 6:44 a.m.	RK	Botany	Olive-sided Flycatcher	<i>Contopus cooperi</i>	1	30	SW	Heard	Within Wetland	One bird heard off in wetland
2025-06-11, 10:50 a.m.	LR, AM	Bat monitor checks	Olive-sided Flycatcher	<i>Contopus cooperi</i>	1	100		Heard		
2023-22-08, 9:57 a.m.	RK, MK	Bat monitor checks	Olive-sided Flycatcher	<i>Contopus cooperi</i>	5	Notes	Notes	Seen,Heard	Within Wetland	Harvested spruce bog. Remaining scattered spruces - up to 5 individuals heard. Three were spotted in a tree patch in the open wetland while at least 2 more were heard about 20m south while having eyes on the initial group of three

APPENDIX N
AVIAN RADAR ACOUSTIC TECHNICAL REPORT

strum

CONSULTING



**AVIAN RADAR AND ACOUSTIC TECHNICAL REPORT
Harbour Hills Wind Project**

June 16, 2026

June 16, 2026

EverWind NS Holdings Ltd. and Membertou Development Corporation

**Re: Avian Radar and Acoustic Technical Report
Harbour Hills Wind Project**

Attached is the Avian Radar and Acoustic Technical Report prepared for the Harbour Hills Wind Project.

The report documents our observations and findings.

We trust this to be satisfactory at this time. Once you have had an opportunity to review this correspondence, please contact us to address any questions you may have.

Thank you,



Mark MacDonald, MScF
Terrestrial Lead
Environmental Assessment & Approvals
mmacdonald@strum.com

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1.0 INTRODUCTION

Avian radar and acoustic assessments were undertaken during the 2023 spring and fall migratory periods as well as the 2023 summer breeding period by Strum Consulting.

2.0 AVIAN RADAR SYSTEM

2.1 Avian Radar System Methodology

Survey methodology followed guidance provided by Environment and Climate Change Canada-Canadian Wildlife Services (ECCC-CWS) for passive bird monitoring programs (ECCC-CWS, 2022).

The guidance also recommends that acoustic and radar studies be conducted from March 15 to June 7 (to capture migratory bird activity in the spring season) and from July 15 to November 30 (for the fall migration season) (ECCC-CWS, 2022).

2.1.1 Avian Radar System Deployment

During the 2023 monitoring campaign, two Simrad Halo 20 pulse compression marine surveillance radars were employed in different locations within the Study Area and angled diagonally at 45° above the horizon. These avian radar systems (ARS) each consist of two x-band pulse compression surveillance radars oriented specifically to scan the airspace approximately 50 m to 3,000 m above the Project. The diagonal orientation allowed for a 150° scan of the airspace above each ARS, while the 210° below the radar is blanked. The diagonal orientation also allows for the calculation of the height of any potential avian target.

Each ARS was deployed with an off grid 12V system that was designed for optimal active monitoring and specificity in deployment. Each system was designed to charge and store energy using solar panels and a battery bank, while also powering the radars and associated equipment for data collection and remote communications. Each system in its entirety is designed to be mobile, so the movement of both ARS systems was possible throughout a season, if needed.

One ARS unit (Fishermans Harbour) was placed in the southeastern portion of the Study Area near the Country Harbour Ferry from April 16 to November 27, 2023, and was operating for 182 days. The second (Indian River Road) ARS unit was placed in northwestern portion of the Study Area near the community of Melrose from April 11 to November 27, 2023, and was operating for 203 days (Drawing 1, Appendix A). Both ARS were scheduled to record in the evening to capture nighttime activities (i.e., 18:00 to 7:00). These locations provided a good line of sight (i.e., relatively few trees in the immediate area) in the airspace above the Project; southern exposure for solar charging; sufficient cellular and satellite coverage for remote communications; and accessibility for spot checks. The ARS units were mounted off the ground to minimize ground noise interference and lessen the impact of local microtopography on data collection and quality.

2.1.2 Avian Radar Assessment

Avian radar assessment results were processed using the radR platform, an open-source platform designed for the processing of radar data for biological applications (Taylor et al., 2010). Outputs from this platform were then analyzed using Microsoft Excel. Standard settings for the identification of biological targets (BTs), such as birds and bats, were used. Targets reflected by the radar generated blips in the image of the radar scan. The radR platform helps filter sequential images of radar scans to identify blips that occur in the same area over at least four or five scans. Should these constraints be met, a target is generated. BTs are most likely generated by birds, but could also be bats and insects, or even drones and planes. Weather occurrences, such as fog, rain, and low cloud cover, may cause interference with the radar (similarly to weather radar), which lowers the effectiveness of the system and reduces the reliability of the system's ability to detect birds. As such, data was excluded from the analysis when the minimum hourly rainfall was ≥ 0.5 mm. Rainfall data was obtained from ECCC's Collegeville Weather Station (ECCC, 2025).

Discussion of Migration Cues in Radar Results

The nature of migratory bird activity is likely attributable in large part to weather, as it is well established that weather and atmospheric conditions influence bird migration activity, especially wind speed and direction (La Sorte & Fink, 2017; Nussbaumer et al., 2022). Birds are thought to take advantage of favourable conditions such as tailwinds to travel further while using less energy (Nussbaumer et al., 2022). As such, birds migrating through Nova Scotia during the spring likely use northerly winds, while those travelling in fall likely use southerly winds. In addition to wind direction, migrating birds also take advantage of favourable wind speeds to expedite their migration or to avoid unfavourable headwinds (Nussbaumer et al., 2022).

Cues that are theorized to play a role in avian migration include:

- Wind speed and direction (Gudmundsson et al., 2011; La Sorte & Fink, 2017; Nussbaumer et al., 2022)
- Temperature (Brisson-Curadeau et al., 2020; Burnside et al., 2021)
- Changes in migration cohort or population sizes (Miller-Rushing et al., 2008)
- Food Availability (Robart et al., 2019)
- Lunar cycle (Bonnet-Lebrun et al., 2021; Korpach et al., 2024; Norevik et al., 2019; Pyle et al., 1993)
- Tidal phase (Calle et al., 2016; Fonseca et al., 2017)

For this assessment, the variables of wind speed, wind direction, daily temperature, and lunar cycle were analyzed with avian radar data to determine the strength of influence each cue may have on avian migration over the Project.

Discussion of Migratory Bird Density

The Halo 20 radars emit a beam that is angled 12.5° upward and downward from the radar's antenna. The volume of airspace that each radar scans increases with range as the radar

beam extends outwards; therefore, the number of BTs detected by the ARS generally increases with range, until such a point that the radar becomes limited by range and the number of BTs detected drops. To account for this, observing target density per cubic metre of airspace scanned is useful in compensating for the increasing volumes of airspace scanned at each height bin and in determining an accurate comparison of whether a specific height bin contains an especially high or low concentration of targets. Birds per km³ has been used as a metric of bird migration in avifauna for other studies (Farnsworth, 2013). Target density is representative of, and likely proportional to, the migratory bird activity in the airspace above the Project for the cumulative monitoring period.

Based on the geometry of the radar's beam angle, the volume of airspace scanned in each of the height bins was determined using CAD software. These volumes are shown for each height bin in Table 2.1 and were used to determine the target density (i.e., the number of targets detected per cubic km of airspace) based on number of BTs detected in each height bin.

Table 2.1: Airspace Scanned (km³) within the ARS Height Bins

Range Bin (m)	Airspace Scanned (km ³)
0-25	0
25-50	0.1015
50-100	0.2036
100-150	0.2043
150-200	0.2052
200-250	0.2063
250-500	1.052
500-1000	2.226
1000-1500	2.337
1500-2000	2.426
2000-3000	3.774
Total	12.8375

Avian Interaction Model

The level of interaction between migratory birds and the Project turbines can be estimated using data collected from the radar monitoring in 2023. Interactions may include sensory disturbance to birds passing near the turbines, requiring birds to maneuver around the turbines and thus forcing migratory birds to expend additional energy; bird collisions with the turbine components; or blade strikes (for operating turbines).

Table 2.2 shows the turbine dimensions for this Project and the parameters used to calculate the interaction airspace volume for the turbine model. The total height of the wind turbine infrastructure was calculated using the hub height and rotor diameter of the proposed turbine model, which was subsequently used to determine the rotor sweep area where avifauna could interact with the turbine (i.e., bird strike). The risk of avian interaction is calculated by

comparing the proportion of avian targets detected within the calculated rotor sweep area of the proposed turbine.

Table 2.2: Turbine – Avifauna Interaction Volume Calculation Information

Turbine Model	Goldwind GWH182-8.0
Hub Height	130 m
Total Height	221.7 m
Rotor Diameter	183.4
Blade Length	91.7 m
Rotor Sweep Area	26,417.31 m ²

2.2 Avian Radar Assessment

Data collected by each ARS during the 2023 monitoring period was analyzed to provide the number of biological target (nBTs) by date, time, height and by migratory cue (Table 1 and 2, Appendix B). Data was divided into three monitoring periods in accordance with the ECCC-CWS guidance (2022): spring (March 16 to June 6), summer breeding (June 7 to July 15), and fall (July 16 to November 30).

The Fishermans Harbour (FH) ARS identified 19 BTs during the 2023 spring monitoring period with all occurring on May 2, 2023. The Indian River Road (IRR) ARS identified 282 BTs during the 2023 spring monitoring period. High numbers of BTs were detected by the IRR ARS on April 30 (nBTs = 47), May 21 (nBTs = 62), and June 3 (nBTs = 38) (Figure 2.1).

During the spring 2023 monitoring period, the FH ARS detected BTs on 2% of the monitored days and the IRR ARS detected BTs on 45% of the monitored days, with late April being the period where BTs were the most consistently detected.

The largest proportion of BTs detected by the FH ARS were at heights between 250 m to 1,500 m and the largest number of BTs were between 1000 m to 1,500 m (nBTs = 7) (Table 2.3). The highest portion of BTs detected by the IRR ARS were at heights between 50 m to 100 m and the largest number of BTs were between 50 m to 100 m (nBTs = 150) (Table 2.4).

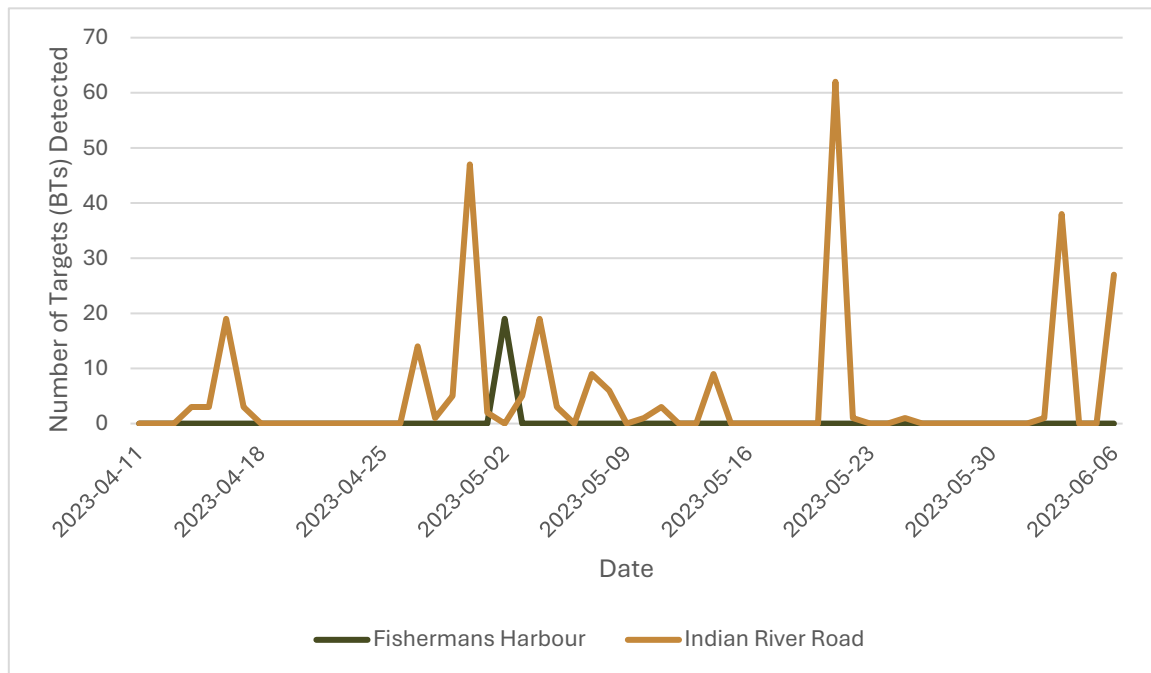


Figure 2.1: Number of BTs detected throughout the 2023 Spring Monitoring Period

The FH ARS identified 4,572 BTs during the 2023 summer breeding period with peak BT detections occurring on June 14 (nBTs = 191), June 15 (nBTs = 1,254), July 4 (nBTs = 139) and July 12, 2023 (nBTs = 2,967). The IRR ARS identified 3,699 BTs during the 2023 summer breeding period. High numbers of BTs were detected by the IRR ARS on June 9 (nBTs = 325), June 15 (nBTs = 316), and July 12, 2023 (nBTs = 2,934) (Figure 2.2).

During the 2023 summer breeding period, the FH ARS detected BTs on 21% of the monitored days with late June to mid-July being the period where BTs were the most consistently detected. The IRR ARS detected BTs on 19% of the monitored days with late June being the period where BTs were the most consistently detected.

The highest portion of BTs detected by the FH ARS were at heights between 250 m to 1,500 m and the largest number of BTs were between 500 m to 1,000 m (nBTs = 2,319) (Table 2.3). The highest portion of BTs detected by the IRR ARS were detected at heights between 250 m to 1,500 m and the largest number of BTs were between 500 m to 1,000 m (nBTs = 1,847) (Table 2.4).

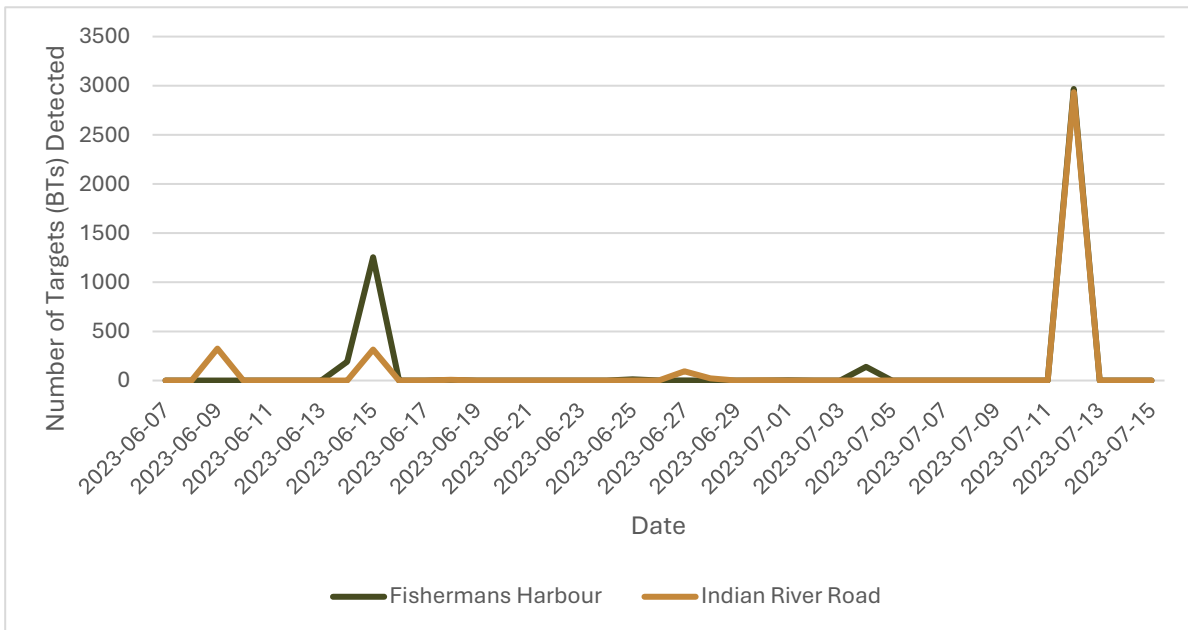


Figure 2.2: Number of BTs detected throughout the 2023 Summer Breeding Period

The FH ARS identified 4,483 BTs during the 2023 fall monitoring period with peak BT detections occurring on July 28 (nBTs = 689), September 14 (nBTs = 1,359), October 22 (nBTs = 750) and November 1, 2023 (nBTs = 680). The IRR ARS identified 2,121 BTs during the 2023 fall monitoring period. High numbers of BTs were detected by the IRR ARS on July 22 (nBTs = 504), August 5 (nBTs = 170), August 31 (nBTs = 746), and September 12, 2023 (nBTs = 218) (Figure 2.3).

During the 2023 summer breeding period, the FH ARS detected BTs on 14% of the monitored days with no periods where BTs were consistently detected. The IRR ARS detected BTs on 13% of the monitored days with mid-July to early-August June being the period where BTs were the most consistently detected and few BTs detected after September 12, 2023.

The highest portion of BTs detected by the FH ARS were detected at heights between 250 m to 1,500 m and the largest number of BTs were between 500 m to 1,000 m (nBTs = 2,345) (Table 2.3). The highest portion of BTs detected by the IRR ARS were detected at heights between 250 m to 1500 m and the largest number of BTs were between 500 m to 1,000 m (nBTs = 1,176) (Table 2.4).

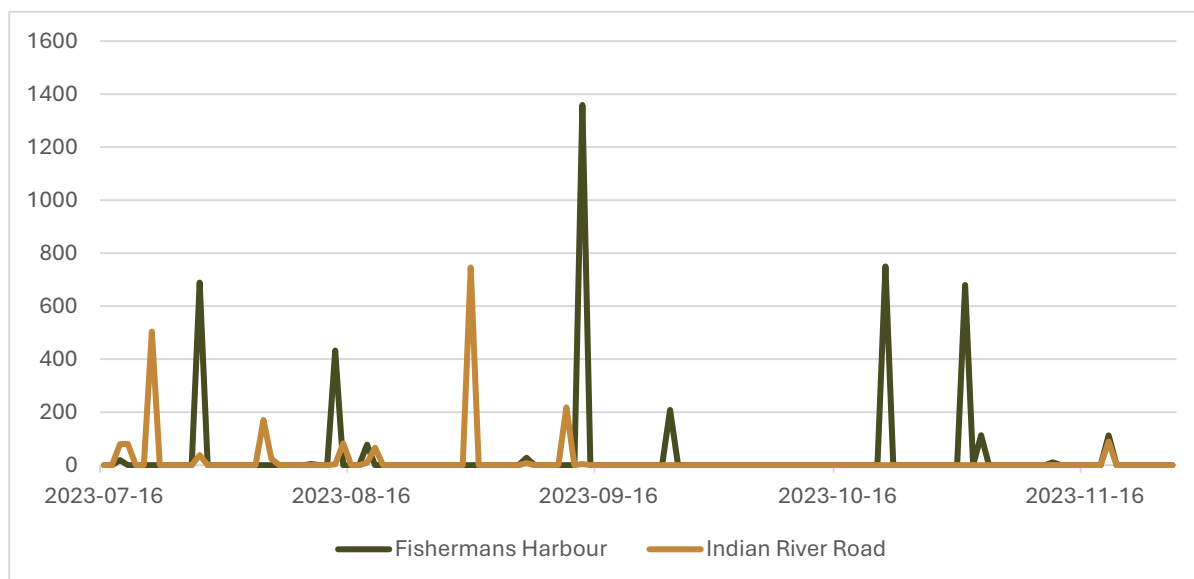


Figure 2.3: Number of BTs detected throughout the 2023 Fall Monitoring Period

Table 2.3: Number of BTs Detected per Fishermans Harbour ARS Height Bin During the 2023 Monitoring Period.

Range Bin (m)	Number of Targets Detected (Spring)	Number of Targets Detected (Summer)	Number of Targets Detected (Fall)
0-25	0	0	0
25-50	0	0	0
50-100	0	7	9
100-150	0	57	44
150-200	0	81	42
200-250	0	86	44
250-500	3	907	741
500-1000	7	2,319	2,345
1000-1500	7	886	1,024
1500-2000	2	229	234
2000-3000	0	0	0
Total	19	4,572	4,483

Table 2.4: Number of BTs Detected per IRR ARS Height Bin During the 2023 Monitoring Period.

Range Bin (m)	Number of Targets Detected (Spring)	Number of Targets Detected (Summer)	Number of Targets Detected (Fall)
0-25	0	0	0
25-50	0	0	0
50-100	150	14	2
100-150	1	39	14

Range Bin (m)	Number of Targets Detected (Spring)	Number of Targets Detected (Summer)	Number of Targets Detected (Fall)
150-200	1	47	13
200-250	1	51	8
250-500	20	513	227
500-1000	84	1,847	1,176
1000-1500	22	956	562
1500-2000	3	232	119
2000-3000	0	0	0
Total	282	3,699	2,121

Overall, the results of the 2023 ARS monitoring campaign suggest that avian migration activity occurred stochastically throughout the entire monitoring campaign. The ARS detected a small number of large migration events that occurred over the course of three-to-five-day periods throughout each monitoring period. It is likely that migration conditions were favorable during these relatively short mass migration events.

Timing of Migratory Movements

Throughout the entire 2023 monitoring campaign, BTs were detected by the ARS during most hours between sunset and sunrise, although, during the spring and summer breeding periods no BTs were detected by the FH ARS between 21:00 and 00:00 (Figure 2.4; note that the ARS was not detecting BTs during the daytime hours between sunrise and sunset). During the spring 2023 monitoring period, all BTs detected by the FH ARS were on a single night from 01:00 to 02:00. The largest number of BTs detected by the IRR ARS during the spring monitoring period were from approximately 18:00 to 22:00 (46% of BTs were detected during these hours). The lowest number of BTs were detected from approximately 22:00 to 02:00 (7% of BTs were detected during these hours).

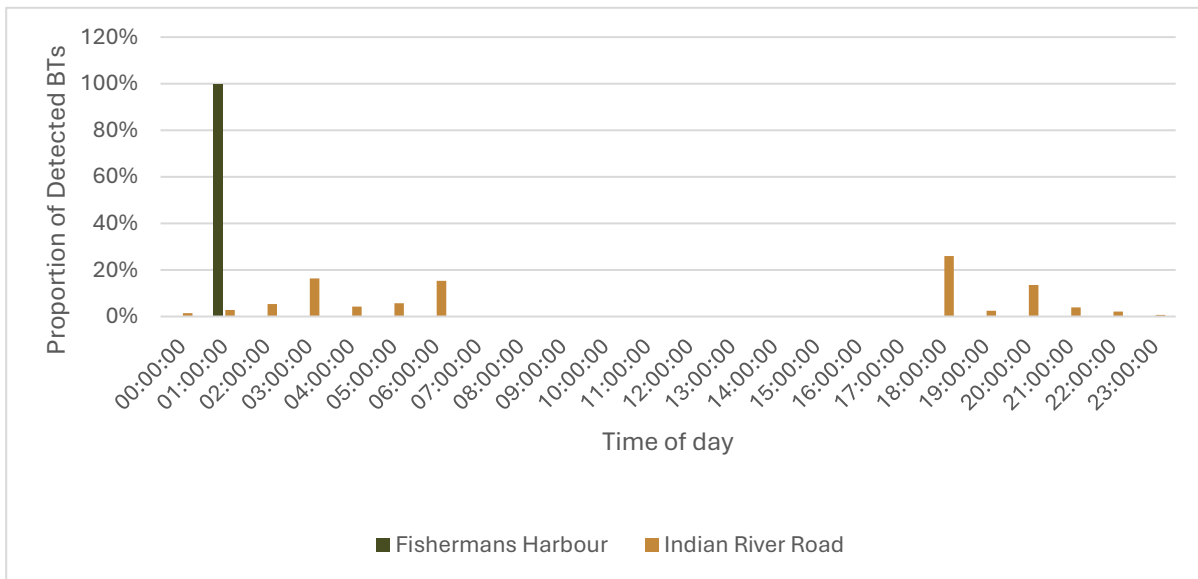


Figure 2.4: Number of BTs Detected per hour during the 2023 Spring Monitoring Period

During the 2023 summer breeding period the FH ARS detected the largest number of BTs from approximately 03:00 to 04:00 (58% of BTs were detected during these hours). No BTs were detected by the FH ARS from approximately 21:00 to 01:00. The largest number of BTs observed by the IRR ARS were detected from approximately 01:00 to 03:00 (80% of BTs were detected during these hours). No BTs were detected by the IRR ARS during the summer breeding period from approximately 03:00 to 06:00.

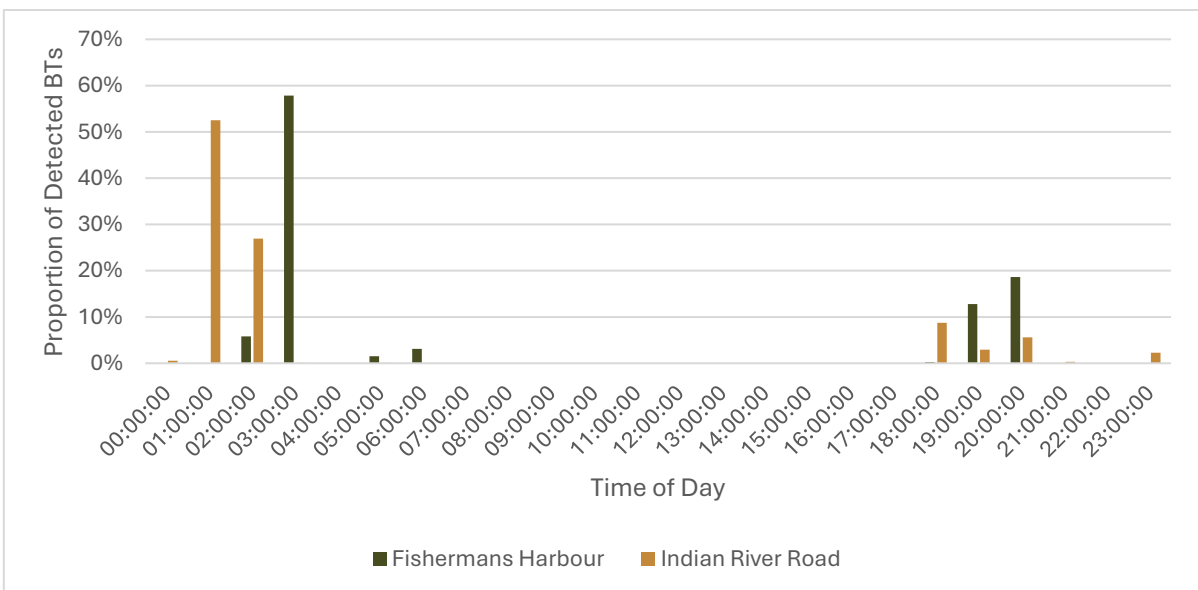


Figure 2.5: Number of BTs Detected per hour during the 2023 Summer Breeding Period

During the fall 2023 monitoring period, the FH ARS detected the largest number of BTs from approximately 20:00 to 22:00 (47% of BTs were detected during these hours) (Figure 2.6). No BTs were detected by the FH ARS during the fall monitoring period from approximately 02:00 to 05:00. The largest number of BTs observed by the IRR ARS were detected from approximately 18:00 to 21:00 (47% of BTs were detected during these hours) with large numbers of BTs also detected from 00:00 to 01:00. The lowest number of BTs observed by the IRR ARS during the fall monitoring period were detected from approximately 21:00 to 00:00 (3% of BTs were detected during these hours).

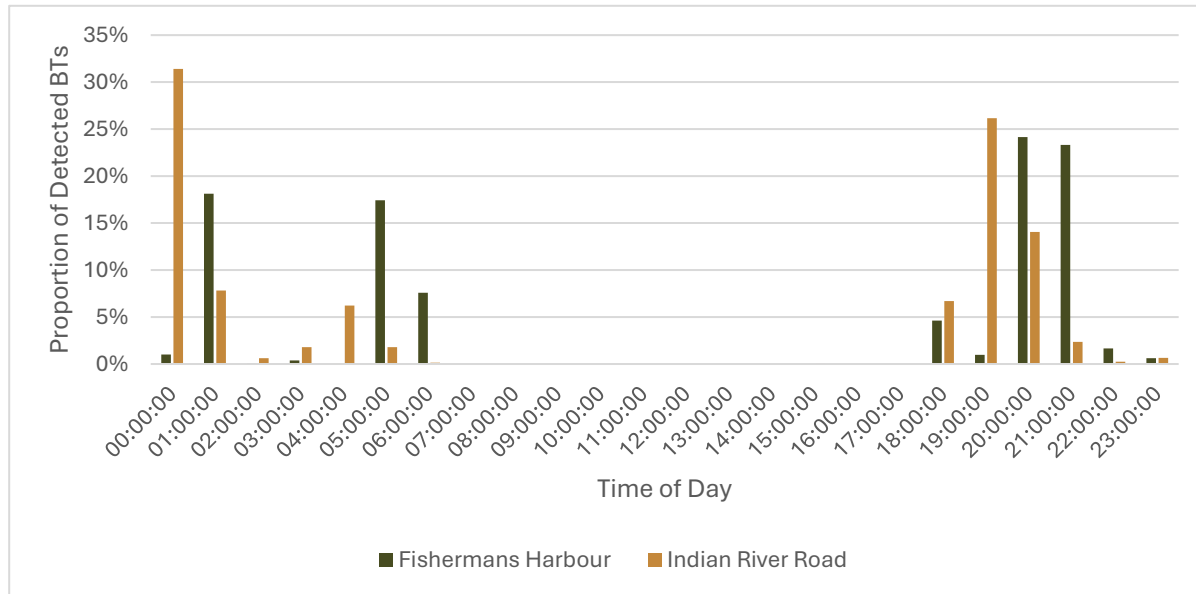


Figure 2.6: Number of BTs Detected per hour during the 2023 Fall Monitoring Period

Cues for Avian Migration

Environmental and climatic cues that were used to compare with the data collected by the avian radar systems included the following:

- Wind direction
- Wind speed
- Temperature
- Lunar cycle

A variety of migration cues not discussed above (e.g., tidal phases) may have also affected bird migration timing. Data analysis was conducted to test the correlation between these cues and migration timing; however, the relationships were deemed too weak to support evidence of these cues affecting migration timing.

Wind Direction

During the 2023 ARS monitoring campaign, the highest number of BTs detected by both ARS units occurred when the wind was blowing from either the south, southwest or southeast. This

pattern persisted throughout all the periods (Figure 2.7, 2.8, 2.9). A breakdown of wind patterns and BTs detections during each monitoring period is as follows:

- Spring migration: FH
 - 100% of BTs were detected when winds were moving from the southeast
- Spring migration: IRR
 - 27% of BTs were detected when winds were moving from the south
 - 20% of BTs were detected when winds were from the northeast
 - 18% of BTs were detected when there was no wind
- Summer breeding: FH
 - 68% of BTs were detected when winds were moving from the south,
 - 23% of BTs were detected when winds were from the southeast
 - 9% of BTs were detected when winds were from the northeast
- Summer breeding: IRR
 - 52% of BTs were detected when winds were from the southwest
 - 30% of BTs were detected when winds were from the south
 - 12% of BTs were detected when winds were from the east
- Fall monitoring: FH
 - 53% of BTs were detected when winds were moving from the south,
 - 19% of BTs were detected when winds were from the northwest
 - 15% of BTs were detected when winds were from the east
- Fall monitoring: IRR
 - 71% of BTs were detected when winds were from the south
 - 10% of BTs were detected when there was no wind
 - 7% of BTs were detected when winds were from the southeast

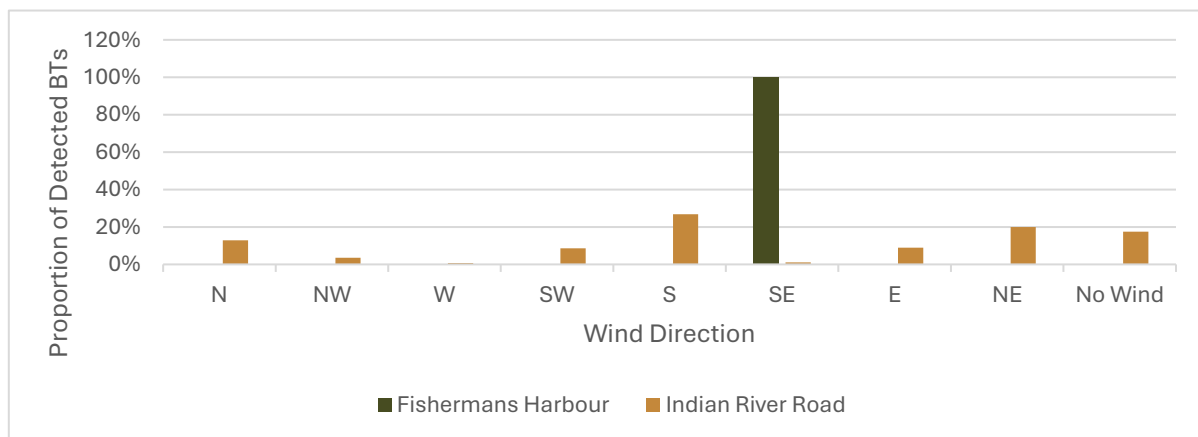


Figure 2.7: Wind Direction by Proportion of BTs Detected – Spring 2023

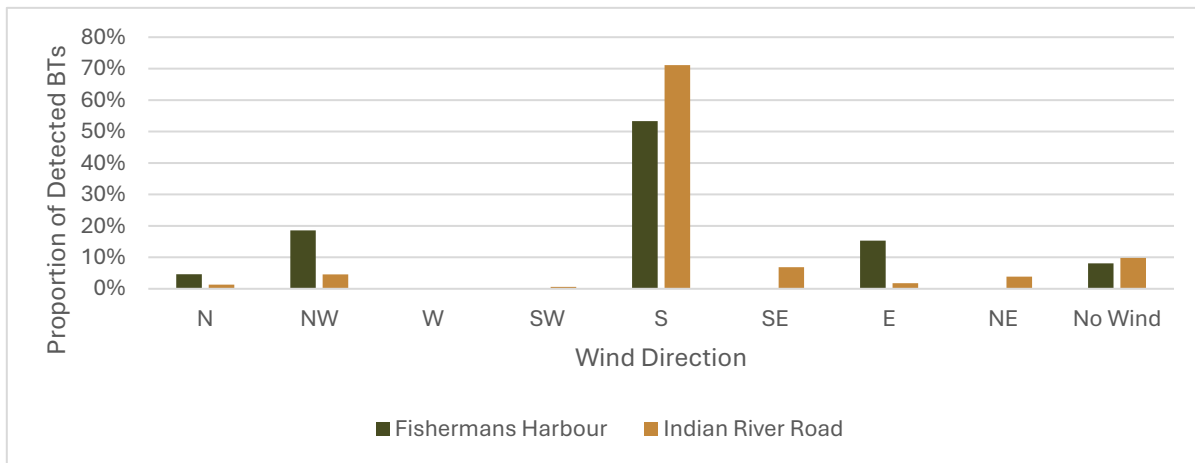


Figure 2.8: Wind Direction by Proportion of BTs Detected – Summer 2023

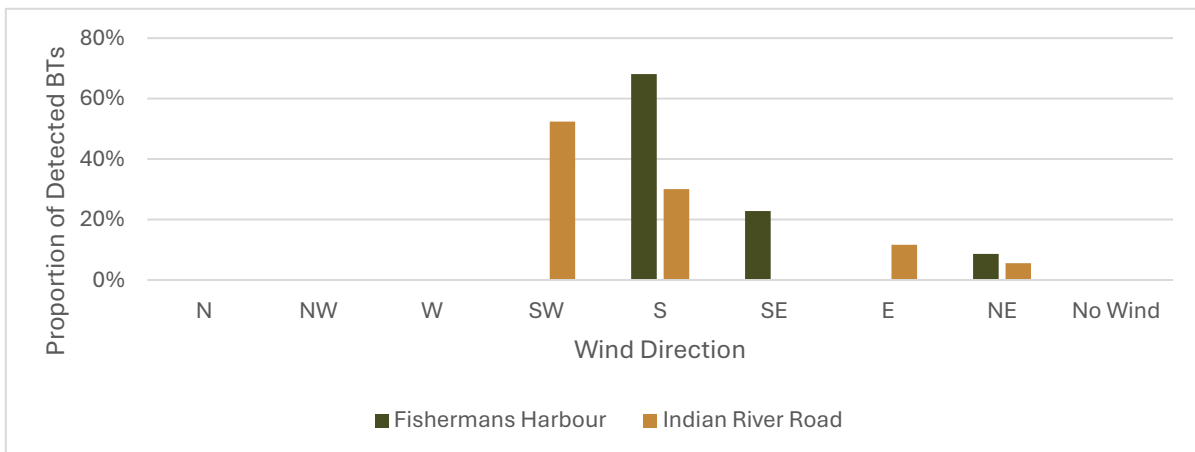


Figure 2.9: Wind Direction by Proportion of BTs Detected – Fall 2023

Results from both the FH and IRR ARS units indicate that birds flying over the Study Area did not appear to show a high degree of wind direction selectivity during the 2023 monitoring campaign. These results are somewhat unexpected as birds have been known to take advantage of specific tailwinds during spring and fall migration, those being a south to north wind in the spring and a north to south wind in the fall (Liechti & Bruderer, 1998). That BTs detected by both the FH and IRR ARS units were primarily detected when winds were moving from the south, southwest and southeast throughout the 2023 monitoring period, indicates a lack of seasonal preference. Migrating birds have been known to show no wind direction selectivity when other cues are present during migration (Thorup et al., 2006), which may have been the case for the 2023 monitoring period.

Wind Speed

During the 2023 spring monitoring period, all the BTs detected by the FH ARS were when wind speeds were between 12 to 19 km/hr which is considered a gentle breeze on the Beaufort wind scale (Figure 2.10). BTs observed by the IRR ARS during this period were most often detected when wind speeds were between 6 to 11 km/hr (40% of BTs) and 12 to 19 km/hr (34% of BTs).

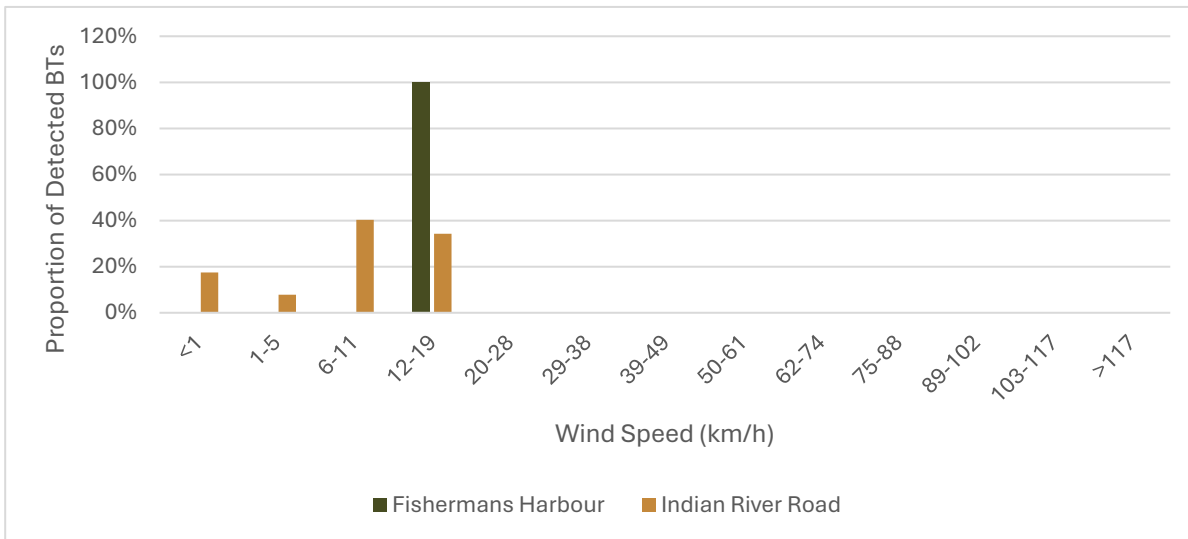


Figure 2.10: Wind Speed by Proportion of BTs Detected – Spring 2023

During the summer breeding period, all BTs observed by the FH ARS were detected when wind speeds were between 1 to 5 km/hr (78% of BTs) and 6 to 11 km/hr (22%) (Figure 2.11). BTs observed by the IRR ARS during this period were most often detected when wind speeds were between 1 to 5 km/hr (69% of BTs) and 6 to 11 km/hr (30% of BTs).

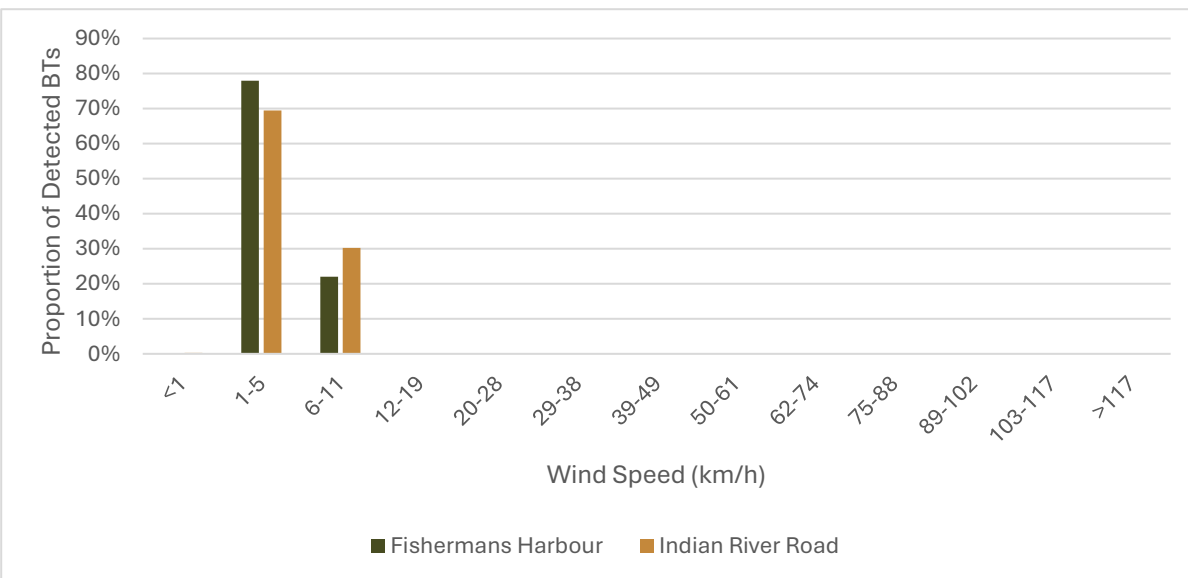


Figure 2.11: Wind Speed by Proportion of BTs Detected – Summer 2023

During the 2023 fall monitoring period, all BTs observed by the FH ARS were detected when wind speeds were between 1 to 5 km/hr (21% of BTs) and 6 to 11 km/hr (64%) (Figure 2.12). BTs observed by the IRR ARS during this period were most often detected when wind speeds were between 6 to 11 km/hr (26% of BTs) and 12 to 19 km/hr (52% of BTs).

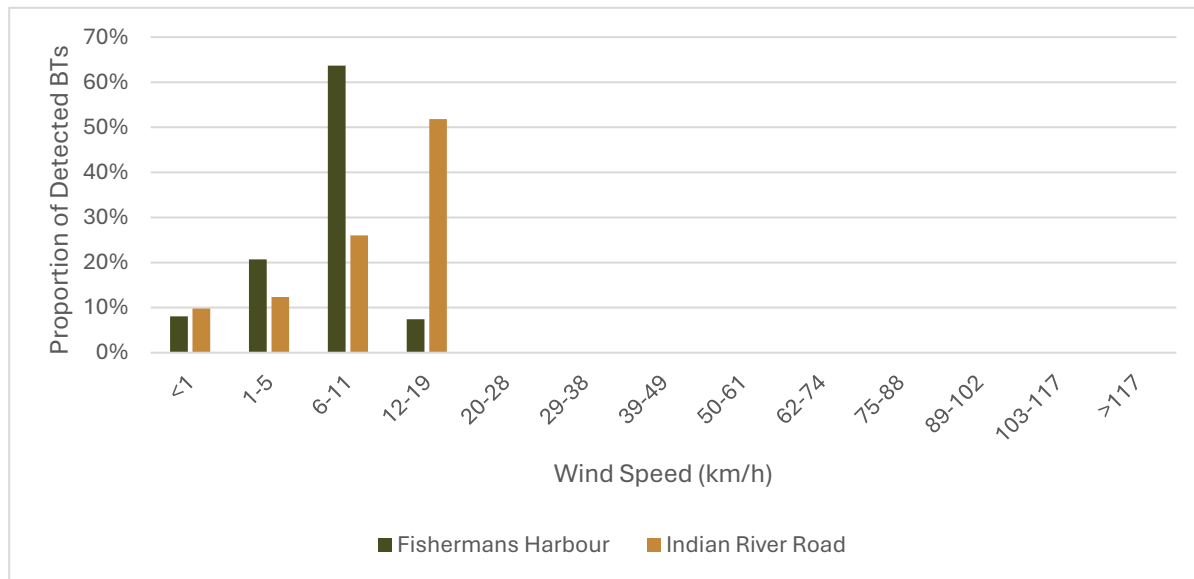


Figure 2.12: Wind Speed by Proportion of BTs Detected – Fall 2023

These results are not unexpected as birds prefer to fly during favorable wind conditions (Dossman et al., 2016). That few targets were detected when there was no wind and no targets detected when wind speeds were above 19 km/hr indicates that birds flying within the Study Area preferred to fly at moderate wind speeds. Winds moving at these speeds would likely increase the flight speeds of migrating birds, but would not be so powerful as to shift birds off their migratory course (Alerstam, 2011; Dossman et al., 2016; Nussbaumer et al., 2022). Flying at reduced wind speeds may also explain why birds within the Study Area appear to be less influenced by wind direction.

Temperature

Figures 2.13 and 2.14 show the number of BTs detected by the FH and IRR ARS units based on daily mean temperatures during the 2023 monitoring period. Birds have been known to depend on consistent temperature cues to indicate migration departure, comparing daily mean temperature with ARS data may provide guidance on predicting peak migration events (Burnside et al., 2021; Klinner & Schmaljohann, 2020).

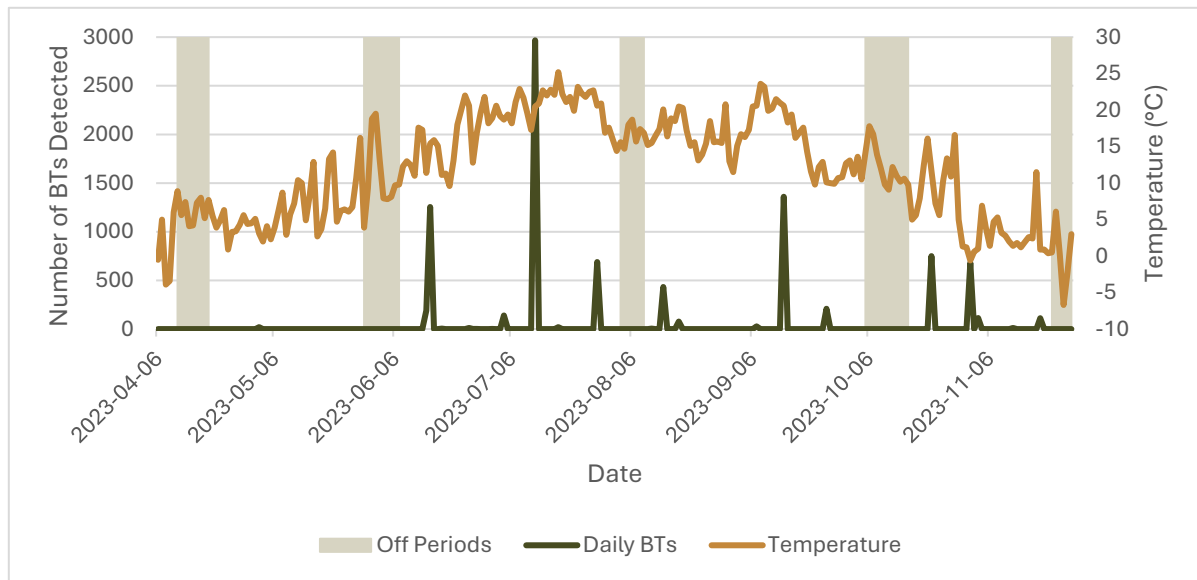


Figure 2.13: Number of BTs detected by the FH ARS during the 2023 Monitoring Period compared to Daily Mean Temperature (°C)

During the spring monitoring period, most BTs observed by the FH ARS were detected as temperatures were beginning to steadily increase following a brief dip in late April. The most consistent period of BT detections occurred during the summer breeding period when average daily temperatures were the highest observed during the entire 2023 monitoring campaign. During the fall monitoring period, most BT detections occurred in the early fall when temperatures were still relatively high. BT detections in the later fall months all occurred shortly after acute decreases in temperature. These results are expected and indicate that bird migration over the Project is a least partially related to shifts in temperature.

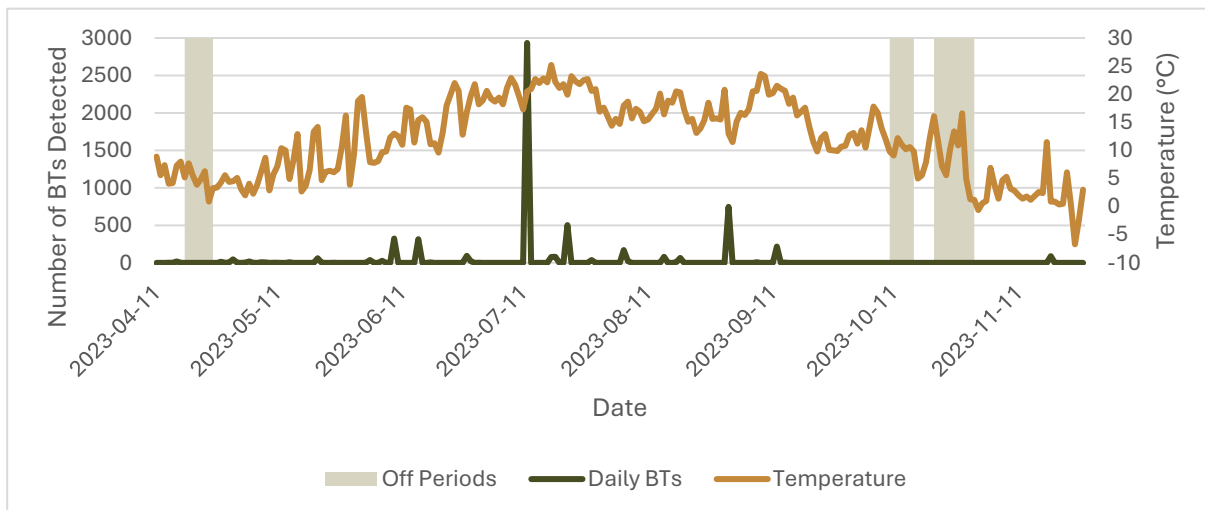


Figure 2.14: Number of Biological Targets Detected by the IRR ARS during the 2023 Monitoring Period compared to Daily Mean Temperature (°C)

During the spring monitoring period, most BTs observed by the IRR ARS were detected as temperatures were beginning to steadily increase following the same brief temperature dip observed by the FH ARS. Like what was observed by the FH ARS, the most consistent period of BT detections by the IRR ARS occurred during the summer breeding period when average daily temperatures were the highest observed during the entire 2023 monitoring campaign. During the fall monitoring period, almost all BT detections occurred in the early fall when temperatures were still relatively high. Following a spike in BT detections on September 12, 2023, BTs were not detected in the later months of fall until another brief spike in detections on November 19, 2023.

Lunar Cycle

The relationship between lunar cycle and daily number of BTs detected by the ARS during the 2023 monitoring period was quantified according to the percentage of exposed moonlight during each of moon's phases (i.e., new moon = 0%, first quarter = 50%, full moon = 100%, last quarter = 50%) (Figure 2.15 and 2.16).

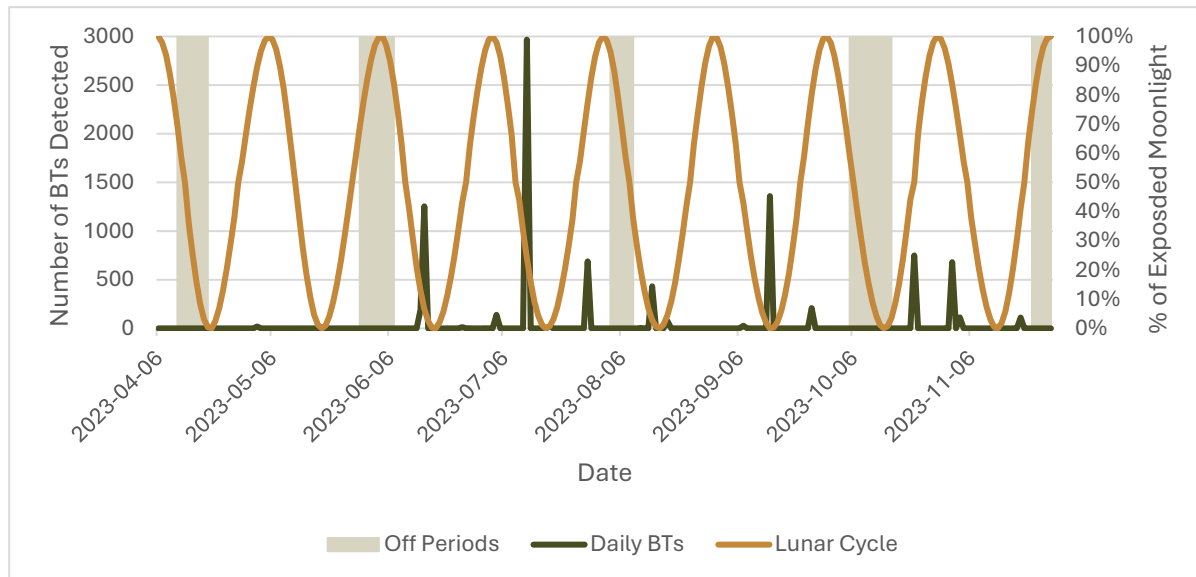


Figure 2.15: Number of Biological Targets Detected by the FH ARS during the 2023 Monitoring Period compared to Lunar Cycle

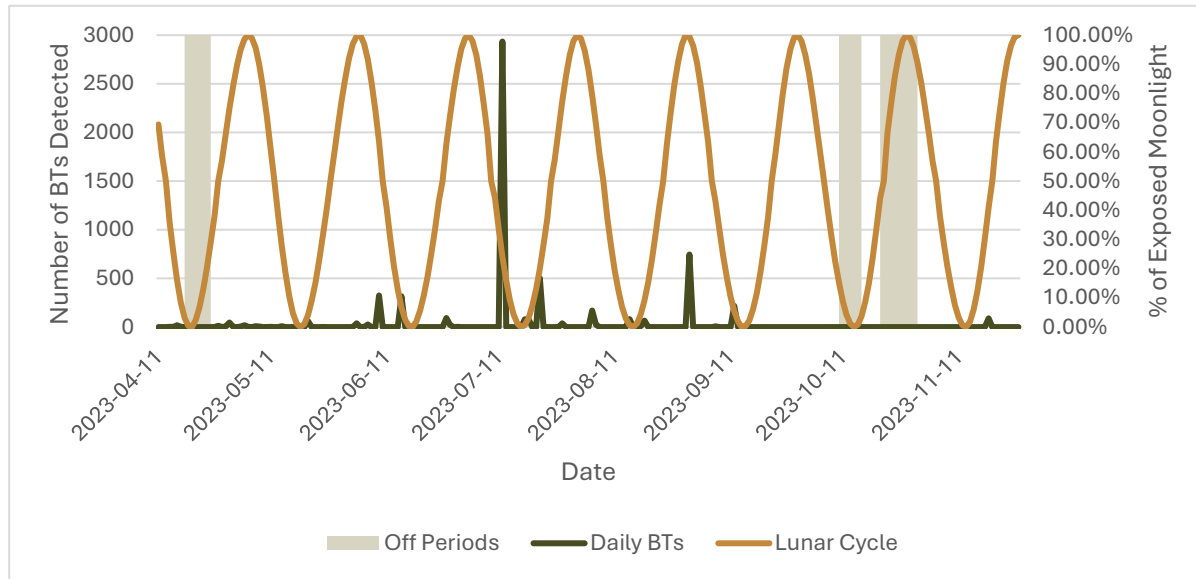


Figure 2.16: Number of Biological Targets Detected by the IRR ARS during the 2023 ARS Monitoring Period compared to Lunar Cycle

Several of the most active migration periods observed during the 2023 monitoring period by both the FH and IRR ARS units occurred shortly after or before a new moon when the amount of exposed moonlight was the lowest. This result is not consistent with our understanding of nocturnal bird behaviors, as it is expected that birds would take advantage of the higher visibility provided by the increased moonlight of a full to forage in preparation for migration (Norevik et al., 2019). However, large numbers of BTs were also detected by both ARS units during periods when there was greater than 50% exposed moonlight with several occurring when there was close to a full moon. These results indicate that migratory movements observed during the 2023 campaign may be more strongly associated with other environmental cues.

Migratory Bird Density

Tables 2.5 and 2.6 detail the target density of the FH and IRR ARS units calculated using the volume of airspace scanned and the number of BTs detected within each height bin during the 2023 monitoring campaign.

Table 2.5: Target Density – FH 2023

Range Bin (m)	Target Density (BT/km ³) (Spring)	Target Density (BT/km ³) (Summer Breeding)	Target Density (BT/km ³) (Fall)
0-25	0.00	0.00	0.00
25-50	0.00	0.00	0.00
50-100	0.00	34.38	44.20
100-150	0.00	279.00	215.37
150-200	0.00	394.74	204.68
200-250	0.00	416.87	213.28

Range Bin (m)	Target Density (BT/km ³) (Spring)	Target Density (BT/km ³) (Summer Breeding)	Target Density (BT/km ³) (Fall)
250-500	2.85	862.17	704.37
500-1000	3.14	1,041.78	1,053.46
1000-1500	3.00	379.12	438.17
1500-2000	0.82	94.39	96.46
2000-3000	0.00	0.00	0.00

Table 2.6: Target Density – IRR 2023

Range Bin (m)	Target Density (BT/km ³) (Spring)	Target Density (BT/km ³) (Summer Breeding)	Target Density (BT/km ³) (Fall)
0-25	0.00	0.00	0.00
25-50	0.00	0.00	0.00
50-100	736.74	68.76	9.82
100-150	4.89	190.90	68.53
150-200	4.87	229.04	63.35
200-250	4.85	247.21	38.78
250-500	19.01	487.64	215.78
500-1000	37.74	829.74	528.30
1000-1500	9.41	409.07	240.48
1500-2000	1.24	95.63	49.05
2000-3000	0.00	0.00	0.00

During the spring 2023 monitoring period, the FH ARS detected the most targets in the 1,000 m to 1,500 m range bin. Approximately 37% of BTs (nBTs = 7) were within this range bin. The target density calculations show relatively similar variation to target count, with target density increasing mostly above 200 m, and peaking in the 500 m to 1,000 m range bin. Like target count, target density decreased above 1,500 m but remained higher than what was detected in the lower height bins (Figure 2.17).

During this same period, the IRR ARS detected the most targets in the 150 to 200 m range bin. Approximately 53% of BTs (nBTs = 150) were within this range bin. The relatively high number of detections in this height bin is associated with a period from April 27 to May 14, where all BTs were detected in this height bin. The target density calculations do not show similar variation to target count, with target density peaking in the 150 to 200 m range then falling to near zero despite the targets detected in some of the higher height bins. These results indicate that despite the increase in scanned airspace there were proportionally few BTs detected above 100 m (Figure 2.17).

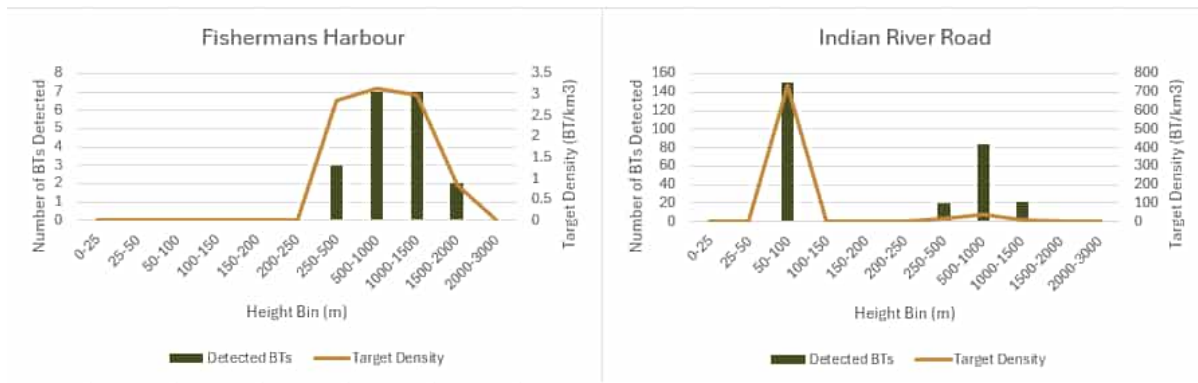


Figure 2.17: Target Height and Target Density – Spring 2023

During the 2023 summer breeding period, the FH ARS detected the most targets in the 500 m to 1,000 m range bin. This is associated with the peaks in detections observed on June 14, 15, and July 12, 2023 (Figure 2.18). Approximately 51% of BTs (nBTs = 2,319) were within this range bin. The target density calculations show similar variation to target count, with target density increasing above 100 m, and peaking in the 500 m to 1,000 m range bin. Similar to target count, target density decreased above 1,000 m but remained higher than what was detected in the lower height bins.

During the 2023 summer breeding period, the IRR ARS also detected the most targets in the 500 m to 1,000 m range bin. This is associated with the peaks in detections observed on June 9, 15, and July 12, 2023 (Figure 2.18). Approximately 50% of BTs (nBTs = 1,847) were within this range bin. The target density calculations show similar variation to target count, with target density increasing above 100 m, and peaking in the 500 m to 1,000 m range bin. Similar to target count, target density decreased above 1,000 m but remained higher than what was detected in the lower height bins (Figure 2.18).

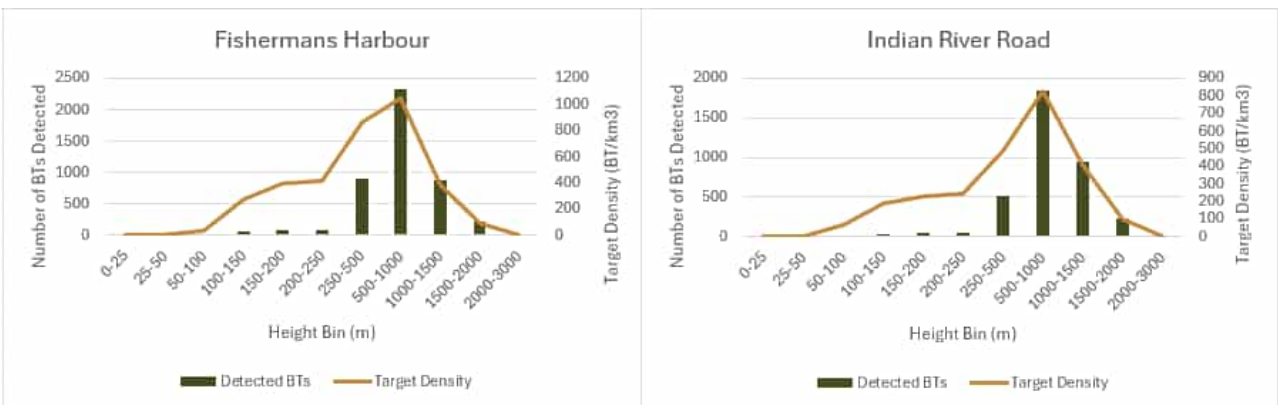


Figure 2.18: Target Height and Target Density – Summer Breeding 2023

During the 2023 fall monitoring period, the FH ARS detected the most targets in the 500 m to 1,000 m range bin (Figure 2.19). This is associated with the peaks in detections observed on July 28, September 14, October 22 and November 1, 2023. Approximately 52% of BTs

(nBTs = 2,345) were within this range bin. The target density calculations show similar variation to target count, with target density increasing above 100 m, and peaking in the 500 m to 1,000 m range bin. Similar to target count, target density decreased above 1,000 m but remained higher than what was detected in the lower height bins.

During the 2023 summer breeding period, the IRR ARS detected the most targets in the 500 m to 1,000 m range bin (Figure 2.19). This is associated with the peaks in detections observed on July 12, August 31 and September 12, 2023. Approximately 55% of BTs (nBTs = 1,176) were within this range bin. The target density calculations show similar variation to target count, with target density increasing above 200 m, and peaking in the 500 m to 1,000 m range bin. Similar to target count, target density decreased above 1,000 m but remained higher than what was detected in the lower height bins (Figure 2.19).

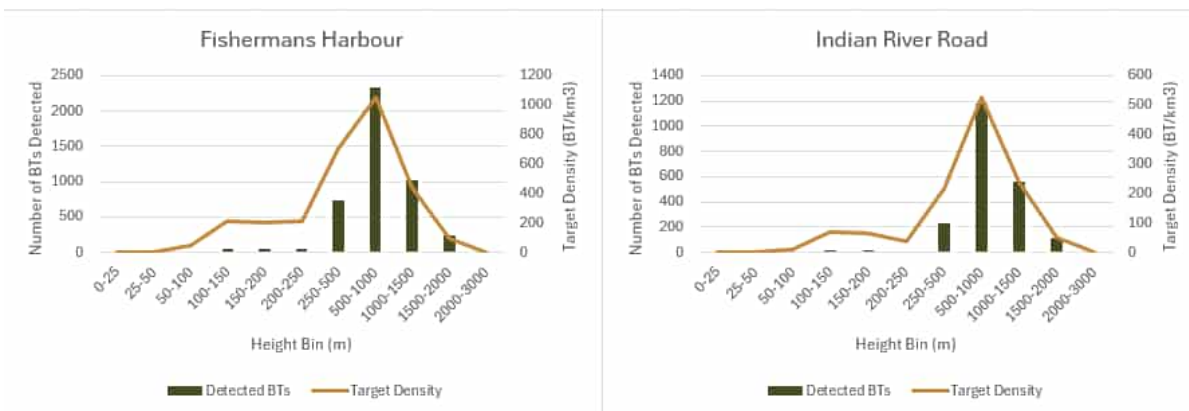


Figure 2.19: Target Height and Target Density – Fall 2023

Across both ARS units the density of targets was observed to be highest above 500 m and decreased after 1,000 to 1,500 m. While the highest proportion of BTs observed during the 2023 spring monitoring period by the IRR ARS were detected in the 50 to 100m height bin, the actual number of BTs detected during that time were relatively low in comparison to the numbers detected during the other monitoring periods.

Avian Interactions with the Project

The number of BTs detected by both the FH and IRR ARS units during the 2023 spring, summer breeding and fall monitoring periods both within and above the rotor swept area of the Project's wind turbines were compared to illustrate the risk of BT interactions with the Project (Figures 2.20 and 2.21). The Project's wind turbines have a hub height of 130 m and a blade diameter of 183 m; therefore, any BTs between heights of 38 m to 221 m were determined to be at risk of interacting with the turbines.

During the 2023 monitoring period, most of the BTs detected by the FH ARS were detected above the rotor swept area of the Project's turbines. The number of targets within the rotor swept area peaked on June 15 (nBTs = 32), July 12 (nBTs = 109) and September 14, 2023 (nBTs = 43). Each of those peak days were also days when the number of BTs detected above

the rotor swept area also peaked. In total, 247 BTs were detected within the rotor swept area of potential turbines which accounted for 2% of the BTs detected during the 2023 monitoring campaign.

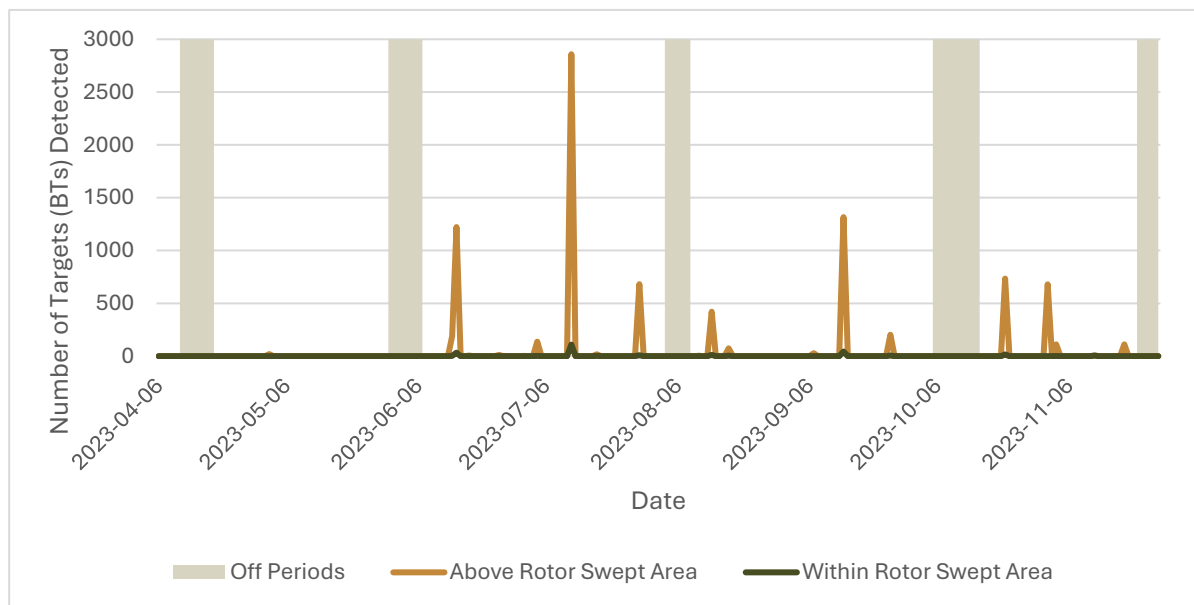


Figure 2.20: Number of Detections Within or Above the Rotor Swept Area During the 2023 Fishermans Harbour ARS Monitoring Campaign

During the 2023 monitoring period, most of the BTs observed by the IRR ARS were also detected above the rotor swept area of the Project's turbines. The number of targets within the rotor swept area peaked on April 16 (nBTs = 19), April 30 (nBTs = 47) and July 12, 2023 (nBTs = 63). In total, 281 BTs were detected within the rotor swept area of potential turbines which accounted for 5% of the BTs detected during the 2023 monitoring campaign.

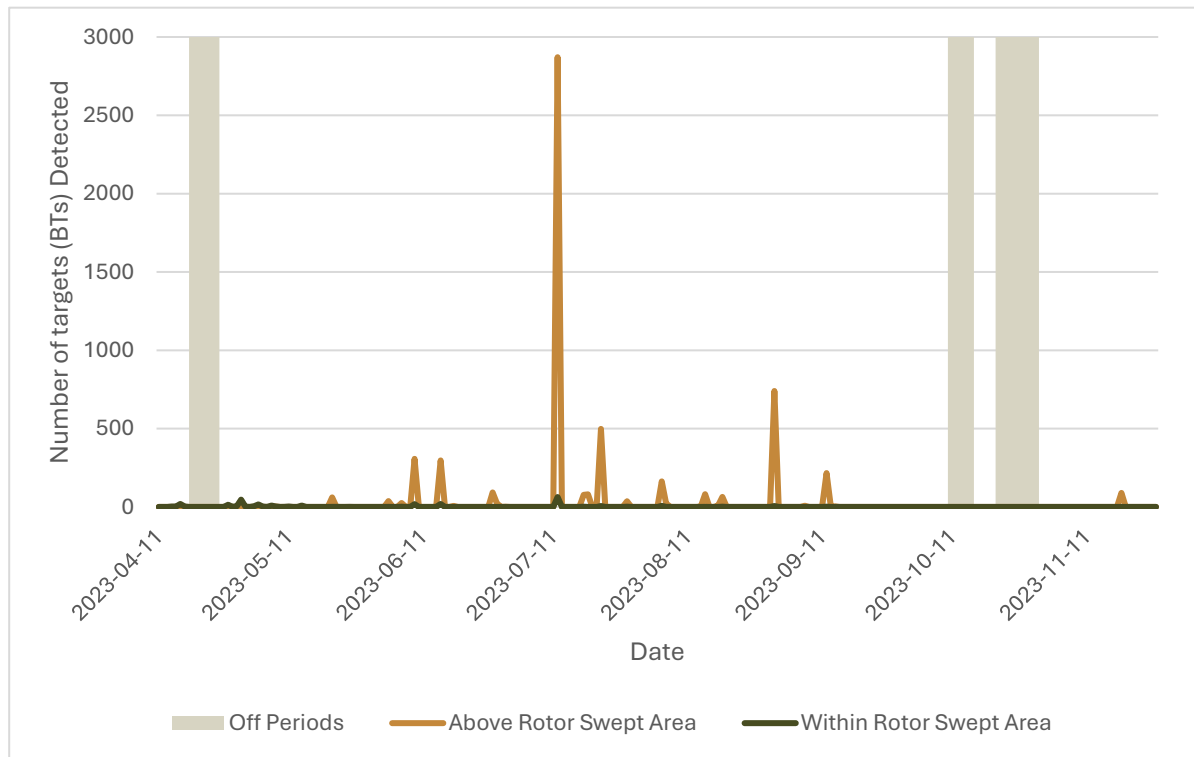


Figure 2.21: Number of Detections Within or Above the Rotor Swept Area During the 2023 Indian River Road ARS Monitoring Campaign

3.0 ACOUSTIC MONITORING UNIT

3.1 Avian Acoustic Methodology

Survey methodology followed guidance provided by ECCC-CWS for passive bird monitoring programs (ECCC-CWS, 2022).

The guidance also recommends that acoustic and radar studies be conducted from March 15 to June 7 (to capture migratory bird activity in the spring season) and from July 15 to November 30 (for the fall migration season) (ECCC-CWS, 2022).

3.1.1 Autonomous Recording Units Deployment

Two Wildlife Acoustics Song Meter 4 autonomous recording units (ARUs) labelled FHBird1 and IRRBird1 were deployed within the Study Area during the 2023 monitoring periods, with the two ARS units. FHBird1 was deployed at the FH's ARS location and IRRBird1 was deployed at the IRR ARS location (Drawing 1, Appendix A). The ARUs were deployed from May 25 to November 27 in 2023 and were located within the western and southwestern portions of the Study Area. The ARUs were placed in clearings or along roads for ease of access, to reduce noise interference from overhanging vegetation, and to provide open access of the microphone to the sky. FHBird1 was deployed in an alder-dominant open area near softwood forest and IRRBird1 was deployed in an open area bordered by young mixedwood forest.

3.1.2 Autonomous Recording Unit Data Processing

Data from FHBird1 and IRRBird1 was analyzed using Nighthawk, a machine learning model that specializes in the detection and classification of avian nocturnal flight calls (NFCs). The output files from the model were then brought into Raven Pro (2022), a computer program specializing in the visualization and analysis of sounds, for manual analysis. Data from the remaining ARUs was analyzed through manual listening.

Nighthawk

Nighthawk is a deep learning model designed by researchers at the Cornell Lab of Ornithology (Van Doren et al., 2023). The Nighthawk model was designed to detect and identify vocalizations made by nocturnally migrating birds and was trained using recordings of NFCs from throughout the Americas. For the purposes of this analysis, Nighthawk was run on its own computer programming environment using Python programming language, and was set using the following default parameters:

- Model sample rate: 22,050 Hz
- Model input duration: 1 s
- Hop size: 20% (percentage of the model input duration)
- Length of detections: 0.2 s

Nighthawk assigns a probability score to each detection it makes, which represents the likelihood of the model making a correct prediction. For this analysis, only detections with a probability score of 0.8 (80%) or above were considered for further analysis in Raven Pro.

Nighthawk is capable of identifying 82 bird species (Table 3, Appendix B), although a species-level identification is not always possible (Van Doren et al., 2023). In these instances, the model may identify vocalizations to the order, family, or group level. Order and family refer to the taxonomic levels, whereas group level refers to a subset of species with similar sounding NFCs. For example, the 'ZEEP' group consists of several similar-sounding warbler species that can be exceptionally difficult to vocally separate from one another. Nighthawk was fed a list containing only species that are likely to occur in this region to limit false species-level identifications.

Nighthawk produced a series of text files containing all detections and predictions for a given audio file input. The text files and audio files were then brought into Raven Pro (version 1.6) for manual verification.

Raven Pro

Raven Pro is a software program that specializes in the visualization and analysis of sounds. Environmental scientists with experience in bird identification brought raw audio files recorded by the ARUS and the text files containing the detections made by Nighthawk into Raven Pro. The scientists were then able to manually verify the detections and assess the accuracy of the Nighthawk results by listening to sound clips and visually analyzing the spectrograms of NFCs. The scientists listened to up to 30 vocalizations for each species identified by Nighthawk.

throughout the entire year, with some variability based on the complexity of the dataset. The vocalizations were annotated 'Y' if the species-level identification made by the model was correct, or 'N' if the identification was incorrect.

Strum environmental scientists noted that some species were identified to have consistently higher percentages of correct or incorrect detections across datasets from various wind projects, such as American robin (*Turdus migratorius*), dark-eyed junco (*Junco hyemalis*), and white-throated sparrow (*Zonotrichia trichas*). As such, verification efforts for these species are proportional to patterns seen in the first 30 verified vocalizations (i.e., if a species with a high number of detections were verified to be 90% or higher correct or incorrect identification by Nighthawk in the first 30 vocalizations, the subsequent vocalizations will be assumed to demonstrate similar results). For species with higher variability in correct and incorrect percentages across various datasets, percentages of correctly or incorrectly identified detections will be modelled based on verification results from other datasets. This method was applied based on the complexity between the FHBird1 and IRRBird1 datasets.

3.2 Acoustic Monitoring Results

Data collected by both ARUs was analysed through Nighthawk to provide peak detection periods and identify the presence of species within the Study Area (Table 4 and 5, Appendix B). This data supplements the avian radar data by providing information on species composition of avifauna migrating over the Project. Data was divided into three monitoring periods in accordance with the ECCC-CWS guidance (2022): spring (March 16 to June 6), summer breeding (June 7 to July 15), and fall (July 16 to November 30).

Subsets of each monitoring period were verified by Strum environmental scientist to identify patterns of detection timings and species composition. False positive detections (or incorrect identification made by Nighthawk) is attributed to an oversensitivity of the model in conjunction with noise interference from wind, vegetation, frogs, insects, and other environmental factors. Spring peeper frogs (*Pseudacris crucifer*) are often a common source of error, since their calls closely resemble the nocturnal flight calls of avian species like the Swainson's thrush (*Catharus ustulatus*).

3.2.1 Nighthawk Total Detections

2023 Spring Nighthawk Results

The Nighthawk model identified 14,469 detections from the FHBird1 data and 6,733 detections in the IRRBird1 data during the 2023 spring monitoring period. Despite the later start of monitoring, both datasets observed the highest number of detections in May. This implied a potential peak spring migration that occurred at both sites.

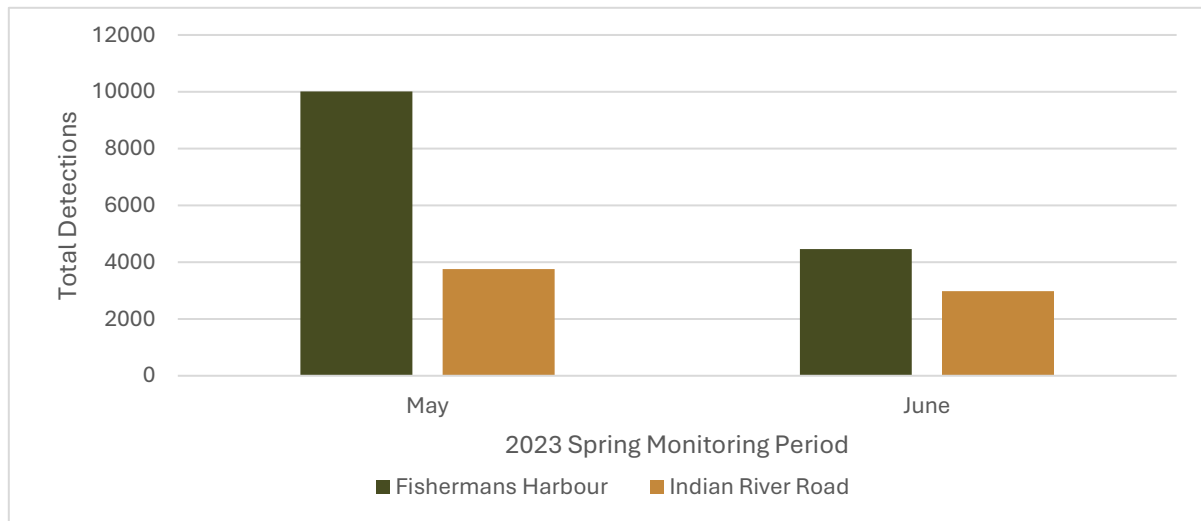


Figure 3.1: Detections made by Nighthawk from the FH1 And IRR1 Data during the 2023 Spring Monitoring Period

Most of the detections made by the FHBIRD1 occurred close to sunrise hours and later than sunset (approximately 05:15 to 05:50 sunrise and 20:15 to 20:50 sunset) (Time and Date, 2026), with the highest number of detections occurring in the morning within the 04:00 (7,135) and 05:00 timeframes (5,067) (Figure 3.2). Detections were significantly higher in the morning than those of the evening, with detections in the evening highest around the 21:00 and 22:00 timeframes and below 500.

Most of the detections made by the IRRBird1 occurred close to sunrise and later than sunset (approximately 05:15 to 05:50 sunrise and 20:15 to 20:50 sunset) (Time and Date, 2026), with the highest number of detections occurring in the morning within the 04:00 (3,002) and 05:00 (1,770) timeframes (Figure 3.2). Similar to the FHBird1 data, the morning detections were significantly higher than those of the evening, with detections increasing later in the evening and remaining consistently below 500.

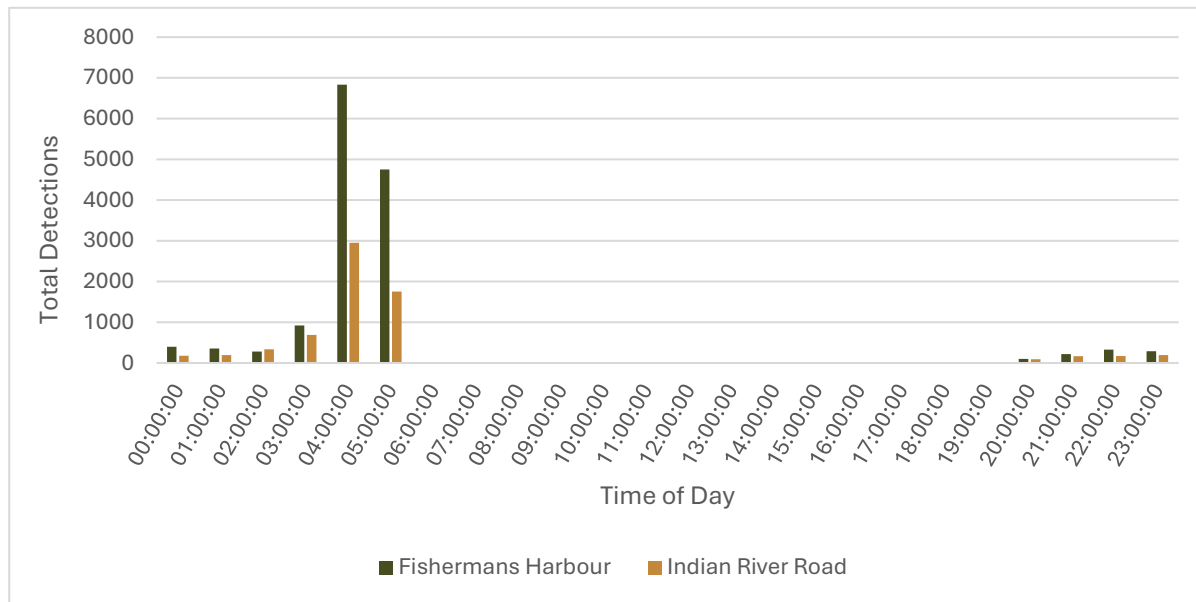


Figure 3.2: Timeframe of Nighthawk Detections at FHBird 1 and IRRBird1 during the 2023 Spring Monitoring Period

A subset of 338 detections from the FHBird1 was manually verified by Strum environmental scientists, and of those, 102 (43%) were correctly identified by Nighthawk (Table 4, Appendix B). Nighthawk was most successful at detecting American robin, black-and-white warbler (*Mniotilta varia*), Canada warbler (*Cardellina canadensis*), common yellowthroat (*Geothlypis trichas*), dark-eyed junco, hermit thrush (*Catharus guttatus*), northern parula (*Setophaga americana*), and white-throated sparrow; all of which had a success rate of 90% or higher when a sample of detections was manually verified. Nighthawk also made 3,202 detections at the group level, 3,369 detections at the family level, and 3,167 at the order level.

A subset of 338 detections from the IRRBird 1 were manually verified by Strum environmental scientists, and of those, 135 (40%) were correctly identified by Nighthawk (Table 5, Appendix B). Nighthawk was most successful at detecting American robin, dark-eyed junco, hermit thrush, Nashville warbler (*Leiothlypis ruficapilla*), northern parula, and northern waterthrush (*Parkesia noveboracensis*); all of which had a success rate of 90% or higher when a sample of detections was manually verified. Nighthawk also made 1,378 detections at the group level, 1,776 detections at the family level, and 2,753 detections at the order level.

Each detection was identified to the highest taxonomic level possible, and detections were not double counted (i.e., if a detection was identified to species level, it was not also counted in the group, family, or order level categories).

The list of identified species within each dataset can be seen in Table 3.1.

Table 3.1: Summary of the 2023 Spring Monitoring Period Nighthawk Detections for FHBird1 and IRRBird1

Species Common Name	Total Detections	Number Manually Verified	Correct Detections (%)	Confidence
FHBird1				
American Pipit	1	1	0%	0.956
American Redstart	127	9	11%	0.893
American Robin	2	2	100%	0.980
American Tree Sparrow	77	12	0%	0.998
Black-and-white Warbler	61	17	94%	0.993
Black-billed Cuckoo	2	2	50%	1.000
Black Oystercatcher	1	1	0%	0.994
Bobolink	4	4	50%	0.999
Black-throated Blue Warbler	7	7	0%	0.916
Cape May Warbler	13	13	15%	0.994
Canada Warbler	10	10	100%	0.990
Chipping Sparrow	4	4	25%	0.921
Chestnut-sided Warbler	7	7	0%	0.943
Common Yellowthroat	22	14	100%	0.997
Dark-eyed Junco	60	6	100%	0.991
Grasshopper Sparrow	2	2	0%	0.992
Hermit Thrush	35	16	100%	1.000
Hooded Warbler	2	2	0%	0.933
Indigo Bunting	3	3	0%	0.971
Killdeer	5	5	0%	0.996
Lincoln's Sparrow	5	5	60%	0.950
Northern Parula	5	5	100%	0.999
Northern Waterthrush	7	7	86%	0.994
Ovenbird	5	5	40%	0.951
Red-breasted Nuthatch	66	13	15%	0.988

Species Common Name	Total Detections	Number Manually Verified	Correct Detections (%)	Confidence
Savannah Sparrow	226	16	13%	0.984
Scarlet Tanager	1	1	0%	0.998
Short-billed Dowitcher	2	2	0%	1.000
Solitary Sandpiper	7	6	0%	0.963
Spotted Sandpiper	17	5	0%	0.995
Swainson's Thrush	200	17	6%	0.857
Upland Sandpiper	6	6	0%	0.993
Vesper Sparrow	1	1	0%	1.000
White-throated Sparrow	3722	11	91%	0.992
Yellow-billed Cuckoo	16	2	0%	0.985
IRRBird1				
American Pipit	3	3	0%	0.926
American Redstart	120	30	10%	0.892
American Robin	6	6	100%	0.999
Black-and-white Warbler	40	22	36%	0.997
Black-throated Blue Warbler	3	3	0%	0.902
Cape May Warbler	34	28	0%	0.980
Canada Warbler	5	5	80%	0.990
Chestnut-sided Warbler	4	4	0%	0.899
Common Yellowthroat	19	6	83%	0.997
Dark-eyed Junco	117	49	100%	0.991
Grasshopper Sparrow	1	1	0%	0.998
Greater Yellowlegs	22	22	91%	0.994
Grey-cheeked Thrush	9	9	0%	1.000
Hermit Thrush	9	9	100%	1.000
Hooded Warbler	4	4	0%	0.909
Indigo Bunting	9	9	0%	0.942

Species Common Name	Total Detections	Number Manually Verified	Correct Detections (%)	Confidence
Nashville Warbler	1	1	100%	0.972
Northern Parula	1	1	100%	1.000
Northern Waterthrush	9	1	100%	0.989
Ovenbird	15	13	46%	0.951
Red-breasted Nuthatch	120	37	0%	0.985
Savannah Sparrow	6	3	67%	0.987
Scarlet Tanager	1	1	0%	1.000
Semipalmated Plover	1	1	0%	0.964
Short-billed Dowitcher	1	1	0%	1.000
Solitary Sandpiper	5	5	0%	0.967
Spotted Sandpiper	12	11	18%	0.995
Swainson's Thrush	47	19	0%	0.858
Upland Sandpiper	6	6	0%	0.998
Veery	1	1	0%	0.912
White-crowned Sparrow	1	1	0%	0.988
White-throated Sparrow	184	22	82%	0.991
Yellow-billed Cuckoo	10	4	0%	0.987

2023 Summer Nighthawk Results

The Nighthawk model made a total of 16,485 detections from the FHBird1 data and a total of 12,435 detections from the IRRBird1 data during the 2023 summer breeding period (Table 4 and 5, Appendix B; Figure 3.3). Notably, each monitor saw opposing peak month, with FHBird1 observing higher detections in mid to late June and IRRBird1 observing higher detections in early to mid-July.

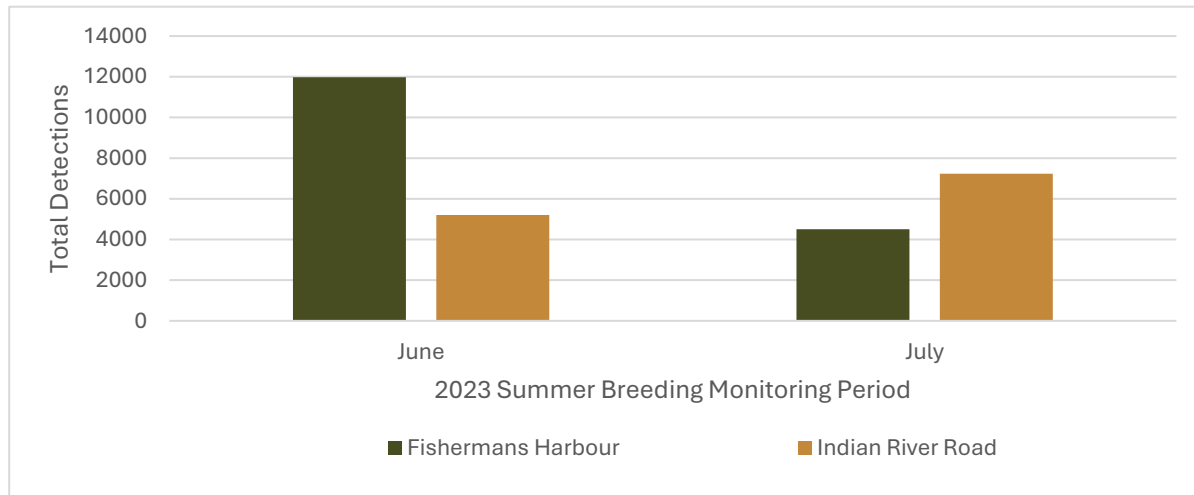


Figure 3.3: Detections made by Nighthawk from the FHBird1 and IRRBird1 Data during the 2023 Summer Breeding Monitoring Period.

Most of the detections made by the FHBird1 occurred close to sunrise and sunset hours (approximately 05:20 to 05:30 sunrise and 20:50 to 21:00 sunset) (Time and Date, 2026), with the highest number of detections occurring in the morning within the 04:00 (2,118) and 05:00 timeframes (6,818) in the morning and within the 20:00 (2,165) and 21:00 (1,405) timeframes in the evening (Figure 3.4).

Most of the detections made by the IRRBird1 occurred close to sunrise and later than sunset (approximately 05:20 to 05:30 sunrise and 20:50 to 21:00 sunset) (Time and Date, 2026), with the highest number of detections occurring in the morning within the 04:00 (1,135) and 05:00 (8,082) timeframes in the morning and within the 20:00 (1,038) timeframe in the evening (Figure 3.4).

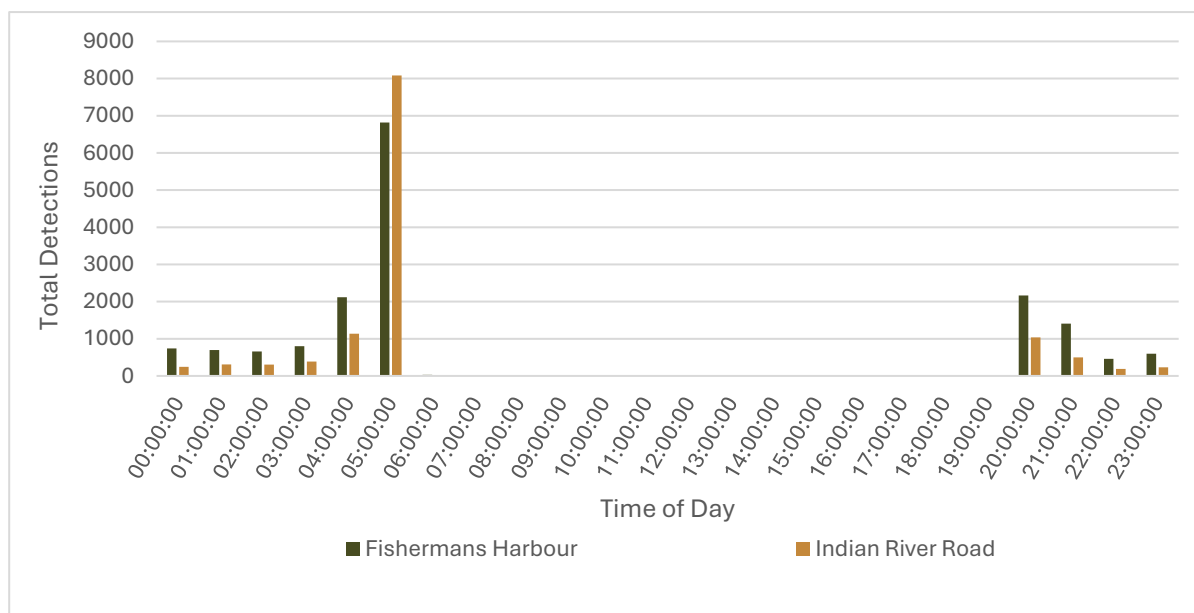


Figure 3.4: Timeframe of Nighthawk Detections at FHBird 1 and IRRBird1 during the 2023 Summer Breeding Monitoring Period

A subset of 252 detections from the FHBird1 were manually verified by Strum environmental scientists, and of those, 43 (17%) were correctly identified by Nighthawk (Table 4, Appendix B). Nighthawk was most successful at detecting American robin, black-and-white warbler, Canada warbler, common yellowthroat, dark-eyed junco, hermit thrush, mourning warbler (*Geothlypis philadelphia*), northern parula, white-throated sparrow, and wood thrush (*Hylocichla mustelina*); all of which had a success rate of 90% or higher when a sample of detections was manually verified. Nighthawk also made 1,660 detections at the group level, 3,439 detections at the family level, and 4,961 detections at the order level.

A subset of 109 detections from the IRRBird 1 were manually verified by Strum environmental scientists, and of those, 10 (9%) were correctly identified by Nighthawk (Table 5, Appendix B). Nighthawk was most successful at detecting American robin, greater yellowlegs (*Tringa melanoleuca*), and solitary sandpiper (*Tringa solitaria*); all of which had a success rate of 90% or higher when a sample of detections was manually verified. Nighthawk also made 1,060 detections at the group level, 1,493 detections at the family level, and 48 detections at the order level.

Table 3.2 includes a list of identified species identified within both FHBird1 and IRRBird1.

Table 3.2: Summary of the 2023 Summer Monitoring Period Nighthawk Detections for FHBird1 and IRRBird1

Species Common Name	Total Detections	Number Manually Verified	Correct Detections (%) ⁽¹⁾	Confidence
FHBird1				
American Pipit	1	1	0%	0.958
American Redstart	3378	9	0%	0.895
American Robin	1	1	100%	1.000
American Tree Sparrow	3	0	0%	0.999
Black-and-white Warbler	41	5	100%	0.999
Black-billed Cuckoo	30	22	9%	0.997
Black Oystercatcher	3	3	0%	0.995
Bobolink	9	8	0%	0.987
Black-throated Blue Warbler	12	7	0%	0.892
Cape May Warbler	9	9	33%	0.987
Canada Warbler	3	3	100%	0.943
Chipping Sparrow	1	1	0%	0.939
Chestnut-sided Warbler	9	5	0%	0.937
Common Yellowthroat	14	2	100%	0.999
Dark-eyed Junco	11	1	100%	0.991
Grasshopper Sparrow	1	1	0%	0.997
Greater Yellowlegs	8	8	75%	0.983
Hermit Thrush	132	8	100%	1.000
Killdeer	59	21	0%	0.996
Lapland Longspur	1	1	0%	0.997
Least Sandpiper	18	18	6%	0.997
Mourning Warbler	1	1	100%	0.996
Nashville Warbler	2	2	50%	0.963
Northern Parula	1	1	100%	0.991
Northern Waterthrush	4	4	50%	1.000

Species Common Name	Total Detections	Number Manually Verified	Correct Detections (%) ⁽¹⁾	Confidence
Red-breasted Nuthatch	401	13	0%	0.985
Savannah Sparrow	24	2	50%	0.981
Semipalmated Plover	2	2	0%	0.964
Short-billed Dowitcher	23	23	0%	0.993
Solitary Sandpiper	17	17	0%	0.947
Spotted Sandpiper	187	12	0%	0.987
Swainson's Thrush	107	8	13%	0.855
Upland Sandpiper	50	15	0%	0.990
Vesper Sparrow	5	5	0%	1.000
White-throated Sparrow	1299	3	100%	0.990
Wilson's Warbler	1	1	0%	0.979
Wood Thrush	1	1	100%	1.000
Yellow-billed Cuckoo	556	8	0%	0.990
IRRBird1				
American Pipit	2	2	0%	0.920
American Redstart	37	0	53%	0.885
American Robin	6	6	100%	1.000
American Tree Sparrow	16	12	0%	0.989
Black-and-white Warbler	2	0	83%	0.999
Black-billed Cuckoo	11	11	0%	1.000
Black Oystercatcher	1	1	0%	0.980
Black-throated Blue Warbler	1	0	18%	0.817
Cape May Warbler	197	0	75%	0.993
Chestnut-sided Warbler	8	0	59%	0.925
Common Yellowthroat	2	0	100%	0.993
Dark-eyed Junco	68	0	100%	0.980
Dickcissel	3	3	0%	0.989

Species Common Name	Total Detections	Number Manually Verified	Correct Detections (%) ⁽¹⁾	Confidence
Greater Yellowlegs	3	3	100%	0.996
Green Heron	2	2	0%	0.999
Grey-cheeked Thrush	8	8	0%	0.999
Hermit Thrush	41	2	0%	1.000
Indigo Bunting	20	0	0%	0.953
Killdeer	1	1	0%	0.998
Lapland Longspur	1	1	0%	0.999
Least Sandpiper	2	1	0%	1.000
MacGillivray's Warbler	1	1	0%	1.000
Northern Waterthrush	6	4	0%	0.999
Ovenbird	7	0	84%	0.968
Red-breasted Nuthatch	47	0	0%	0.980
Savannah Sparrow	2	0	86%	0.990
Scarlet Tanager	53	30	0%	0.997
Short-billed Dowitcher	5	4	0%	1.000
Solitary Sandpiper	1	1	100%	0.976
Spotted Sandpiper	2	1	0%	0.995
Swainson's Thrush	25	0	12%	0.859
Upland Sandpiper	3	3	0%	0.983
White-throated Sparrow	94	0	100%	0.987
Yellow-billed Cuckoo	181	12	0%	0.991

⁽¹⁾ Species with zero manually verified identifications either are presumed to be 100% correct or incorrectly identified by the program based on averages of patterns seen in other datasets verified by Strum or modelled % of correct detections. Modeled numbers are based on averages of patterns seen in other datasets that were previously verified by Strum.

2023 Fall Nighthawk Results

The Nighthawk model made 10,842 detections from the FHBird1 data and 47,059 detections from the IRBird1 data during the 2023 fall monitoring period (Table 4 and 5, Appendix B; Figure 3.5). It is noted that FHBird1 recorded less than 500 detections in August and September and IRBird1 recorded less than 500 detections in October, presumably due to an internal battery malfunction that caused the monitor to be frequently inactive during this period.

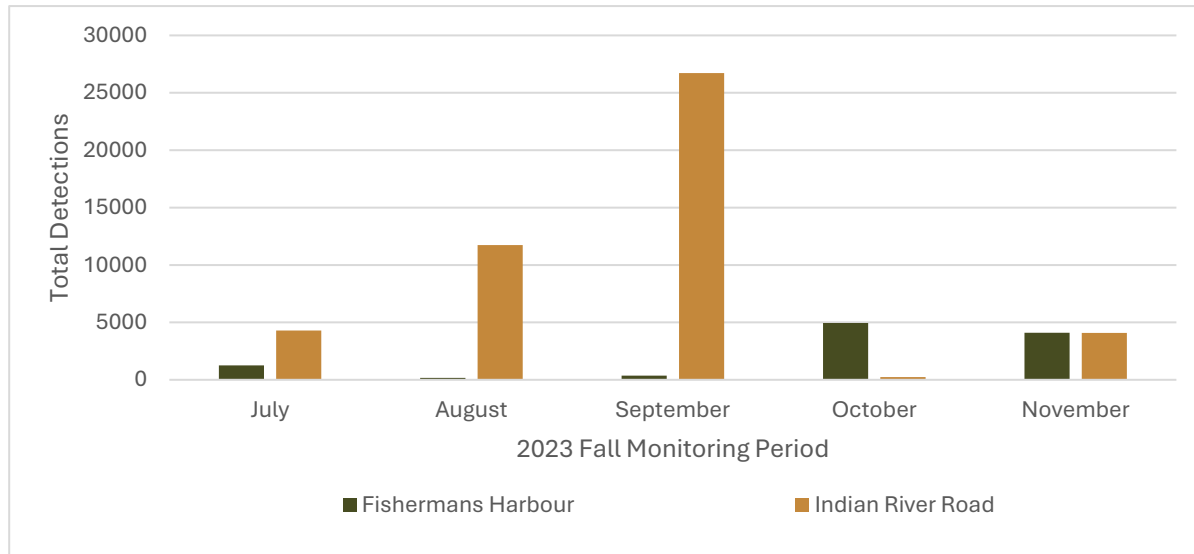


Figure 3.5: Detections made by Nighthawk from the FHBird1 and IRRBird1 Data during the 2023 Fall Monitoring Period

Most of the detections made by the FHBird1 occurred close to sunrise and sunset hours (approximately 06:00 to 07:20 sunrise and 18:00 to 19:20 sunset) (Time and Date, 2026), with the highest number occurring in the morning within the 07:00 (2,184) timeframe in the morning and within the 18:00 timeframe (1,012) in the evening (Figure 3.6).

Most of the detections made by the IRRBird1 occurred close to sunrise and later than sunset (approximately 06:00 to 07:20 sunrise and 18:00 to 19:20 sunset) (Time and Date, 2026), with the highest number occurring in the morning within the 05:00 (6,809), 06:00 (7,684), and 07:00 (3,273) timeframes in the morning. Detections in the evening remained higher than 1,000 across all evening timeframes, suggesting consistent nighttime activity with some spikes from 20:00 to 23:00.

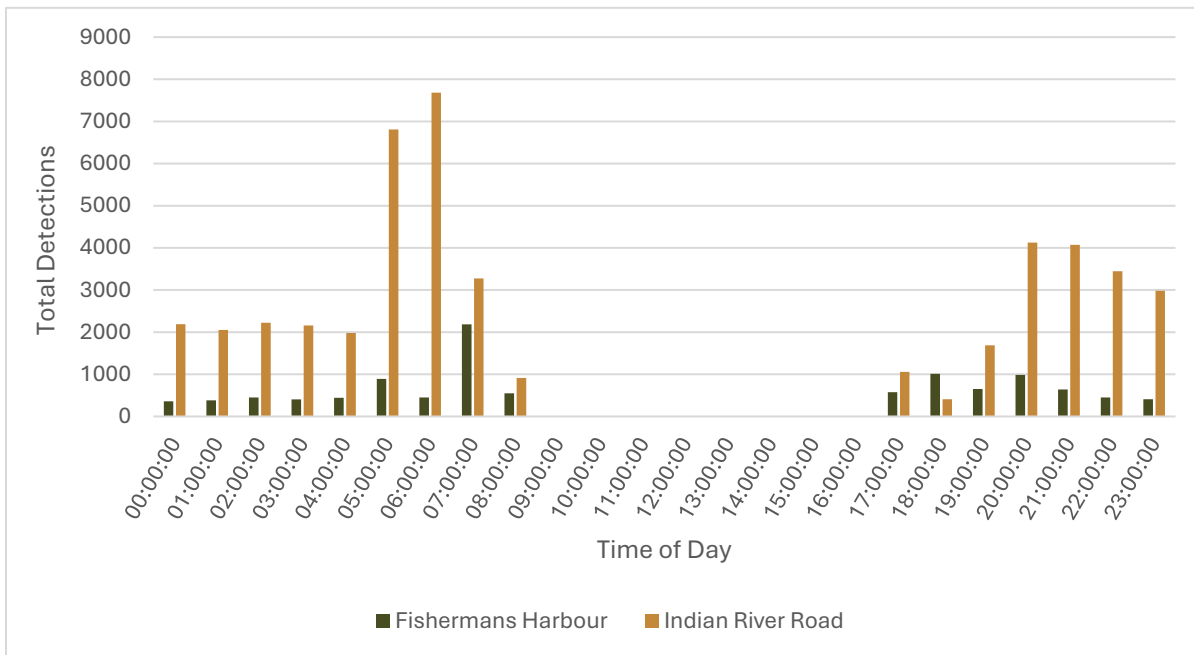


Figure 3.6: Timeframe of Nighthawk Detections at FHBird 1 and IRRBird1 during the 2023 Fall Monitoring Period

A subset of 317 detections from the FHBird 1 were manually verified by Strum environmental scientists, and of those, 140 (44%) were correctly identified by Nighthawk (Table 4, Appendix B). Nighthawk was most successful at detecting American robin, dark-eyed junco, dickcissel (*Spiza americana*), grey-cheeked thrush (*Catharus minimus*), indigo bunting (*Passerina cyanea*), northern parula, palm warbler (*Setophaga palmarum*), and white-throated sparrow; all of which had a success rate of 90% or higher when a sample of detections was manually verified. Nighthawk also made 1,449 detections at the group level, 3,138 detections at the family level, and 4,193 detections at the order level.

A subset of 667 detections from the IRRBird 1 were manually verified by Strum environmental scientists, and of those, 349 (52%) were correctly identified by Nighthawk (Table 5, Appendix B). Nighthawk was most successful at detecting American robin, black-and-white warbler, common yellowthroat, dark-eyed junco, greater yellowlegs, hermit thrush, mourning warbler, palm warbler, savannah sparrow (*Passerculus sandwichensis*), and white-throated sparrow; all of which had a success rate of 90% or higher when a sample of detections was manually verified. Nighthawk also made 874 detections at the group level, 2,897 detections at the family level, and 1,487 detections at the order level.

Table 3.3: Summary of the 2023 Fall Monitoring Period Nighthawk Detections for ARU3

Species Common Name	Total Detections	Number Manually Verified	Correct Detections (%) ⁽¹⁾	Confidence
FHBird1				
American Pipit	13	13	31%	0.960
American Redstart	452	14	14%	0.891
American Robin	75	26	100%	1.000
American Tree Sparrow	207	18	67%	0.998
Black-and-white Warbler	8	7	86%	0.997
Bobolink	13	13	0%	0.998
Black-throated Blue Warbler	30	17	0%	0.894
Cape May Warbler	5	5	0%	0.993
Chipping Sparrow	3	3	33%	0.914
Chestnut-sided Warbler	29	20	0%	0.940
Common Yellowthroat	18	13	85%	0.994
Dark-eyed Junco	369	24	100%	0.996
Dickcissel	4	4	100%	0.998
Grasshopper Sparrow	18	18	0%	0.994
Greater Yellowlegs	17	17	24%	0.997
Grey-cheeked Thrush	1	1	100%	1.000
Hermit Thrush	30	8	75%	1.000
Indigo Bunting	1	1	100%	0.950
Killdeer	12	7	0%	0.999
Lapland Longspur	7	6	0%	0.966
Least Sandpiper	13	12	8%	1.000
Lincoln's Sparrow	3	3	33%	0.968
Northern Parula	1	1	100%	0.998
Northern Waterthrush	5	5	60%	0.999
Ovenbird	6	6	17%	0.939

Species Common Name	Total Detections	Number Manually Verified	Correct Detections (%) ⁽¹⁾	Confidence
Palm Warbler	4	4	100%	1.000
Red-breasted Nuthatch	20	10	0%	0.976
Savannah Sparrow	25	12	75%	0.992
Semipalmated Plover	3	3	0%	0.912
Short-billed Dowitcher	13	12	0%	0.999
Solitary Sandpiper	3	3	67%	0.954
Spotted Sandpiper	52	13	8%	0.987
Swainson's Thrush	6	5	40%	0.861
Upland Sandpiper	16	11	0%	0.997
Vesper Sparrow	1	1	0%	1.000
White-throated Sparrow	258	14	93%	0.996
Yellow-billed Cuckoo	321	21	0%	0.992
IRRBird1				
American Pipit	8	8	50%	0.948
American Redstart	1443	0	30%	0.895
American Robin	17	17	100%	0.999
American tree Sparrow	16	16	25%	0.996
Black-and-white Warbler	372	11	91%	0.997
Bobolink	29	29	0%	0.999
Black-throated blue Warbler	27	27	11%	0.905
Cape May Warbler	246	3	33%	0.991
Canada Warbler	35	27	78%	0.991
Chipping Sparrow	4	4	25%	0.932
Chestnut-sided Warbler	106	29	76%	0.944
Common Yellowthroat	229	31	100%	0.997
Dark-eyed Junco	361	0	100%	0.994
Dickcissel	3	3	0%	0.996

Species Common Name	Total Detections	Number Manually Verified	Correct Detections (%) ⁽¹⁾	Confidence
Grasshopper Sparrow	5	5	0%	0.994
Greater Yellowlegs	5	5	100%	0.990
Grey-cheeked Thrush	6	6	17%	0.998
Hermit Thrush	35	22	95%	0.998
Hooded Warbler	31	26	0%	0.905
Indigo Bunting	43	28	0%	0.944
Killdeer	5	5	0%	1.000
Lapland Longspur	13	10	0%	0.966
Least Sandpiper	6	6	50%	1.000
Lincoln's Sparrow	1	1	0%	0.951
MacGillivray's Warbler	1	1	0%	0.996
Mourning Warbler	45	32	97%	0.974
Nashville Warbler	9	9	89%	0.946
Northern Parula	59	30	63%	0.998
Northern Waterthrush	206	25	88%	0.996
Ovenbird	239	19	84%	0.959
Palm Warbler	7	7	100%	1.000
Red-breasted Nuthatch	20	0	27%	0.984
Rose-breasted Grosbeak	30	30	13%	0.992
Savannah Sparrow	259	32	97%	0.992
Scarlet Tanager	10	2	0%	0.992
Semipalmated Plover	2	2	50%	0.929
Short-billed Dowitcher	26	26	54%	0.999
Solitary Sandpiper	8	8	38%	0.966
Spotted Sandpiper	28	28	68%	0.999
Swainson's Thrush	1652	15	0%	0.871
Upland Sandpiper	5	5	0%	0.997

Species Common Name	Total Detections	Number Manually Verified	Correct Detections (%) ⁽¹⁾	Confidence
Veery	40	30	40%	0.975
Vesper Sparrow	7	7	0%	0.999
White-throated Sparrow	401	10	100%	0.992
Wilson's Warbler	12	11	64%	0.968
Wood Thrush	4	4	25%	1.000
Yellow-billed Cuckoo	30	15	0%	0.988

⁽¹⁾ Species with zero manually verified identifications either are presumed to be 100% correct or incorrectly identified by the program based on averages of patterns seen in other datasets verified by Strum or modelled % of correct detections. Modeled numbers are based on averages of patterns seen in other datasets that were previously verified by Strum.

3.2.2 Timing of Positive Detections

2023 Spring Monitoring Period

Most of the confirmed positive detections made by the FHBird1 and IRRBird1 ARUs during the spring monitoring period occurred in May (75% and 87%), which represents peak spring migration movements for most species. Positive detections decreased from May to June in both datasets, suggesting the decline of the migratory movement from the spring into breeding season.

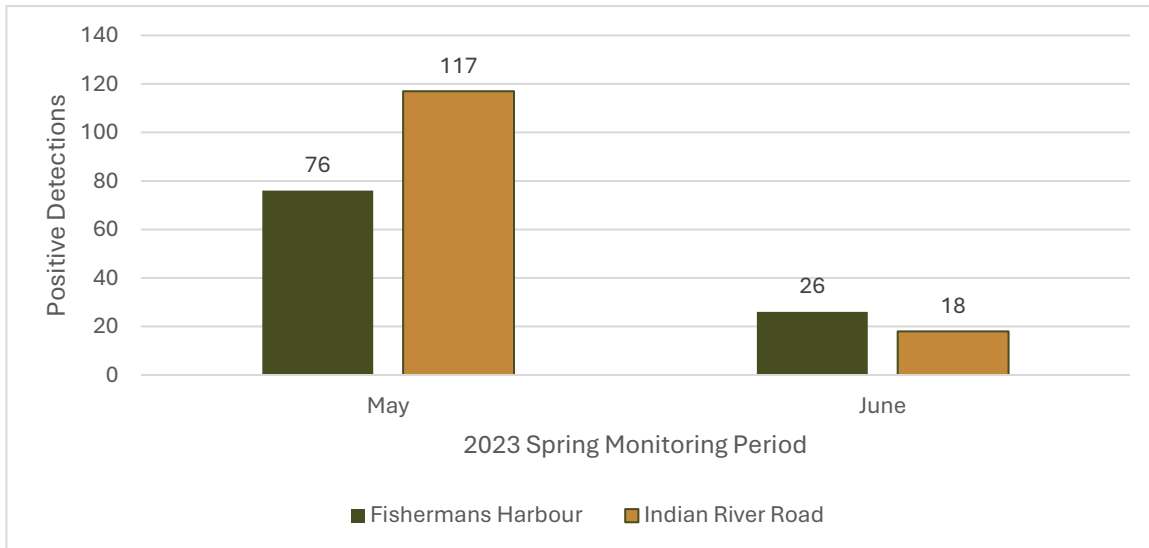


Figure 3.7: Positive Nighthawk Detections for FHBird1 and IRRBird1 during the 2023 Spring Monitoring Period

Most of the positive detections made by the FHBird1 ARU occurred from 04:00 to 06:00 and from 21:00 to 23:00, with the highest number of detections occurring in the 05:00 timeframe (Figure 3.8). These findings are expected as most avian species begin and end nocturnal activity relatively close to sunset and sunrise times, although positive detections in the evening mostly occurred after sunset (Korpach et al., 2024; Van Doren et al., 2023). This is supported by the high number of detections occurring between 05:00 and 06:00, which coincided with the recorded sunrise times during the 2023 spring monitoring period (Time and Date, 2026).

Most of the positive detections made by the IRRBird1 ARU occurred from 04:00 to 06:00, with the highest detections occurring during the 04:00 timeframe (Figure 3.8). While the morning detections occurred relatively close to sunrise hours during this time, little to no positive detections were confirmed during the evening hours and no positive detections were identified during sunset hour (approximately 20:00 to 21:00).

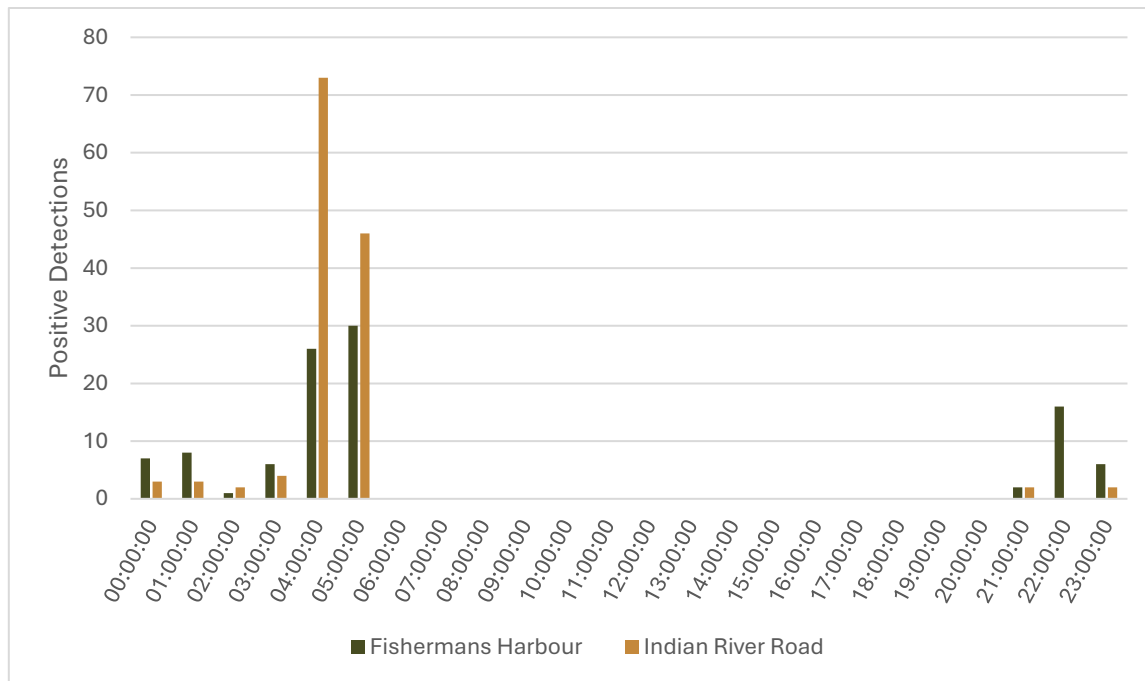


Figure 3.8: Timeframe of Positive Nighthawk Detections at FHBird1 and IRR Bird1 during the 2023 Spring monitoring Period

2023 Summer Breeding Monitoring Period

Most of the confirmed positive detections made by the FHBird1 and IRRBird1 ARUs during the summer breeding monitoring period occurred in June (70% and 60%), before dropping in July (Figure 3.9). The low number of positive detections observed by both monitors during this period are due to a reduction of NFCs as birds moved to produce more songs and calls during peak breeding season.

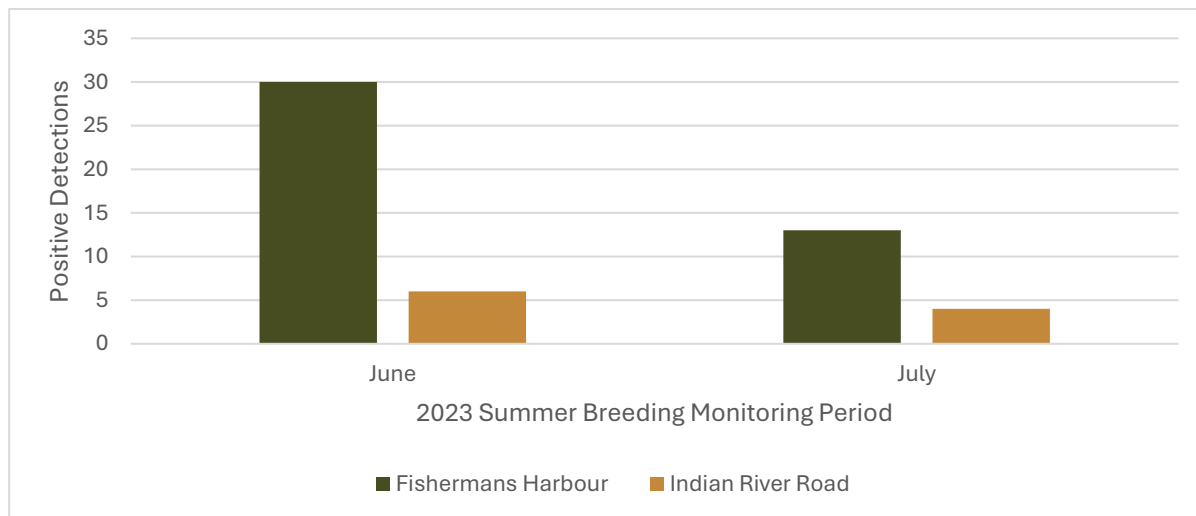


Figure 3.9: Positive Nighthawk Detections for FHBIRD1 and IRRBird1 during the 2023 Summer Breeding Monitoring Period.

Most of the positive detections made by the FHBird1 during the summer breeding period occurred from 05:00 to 06:00 and from 21:00 to 22:00, with the highest detections occurring during the 05:00 timeframe (Figure 3.10). Similarly, most of the positive detections made by IRRBird1 occurred from 20:00 to 21:00 and from 04:00 to 06:00 (Figure 3.10). Notably, FHBird1 saw more consistent detections occurring throughout the night whereas IRRBird1 saw more concentrated detections occurring near sunset and sunrise hours during this time.

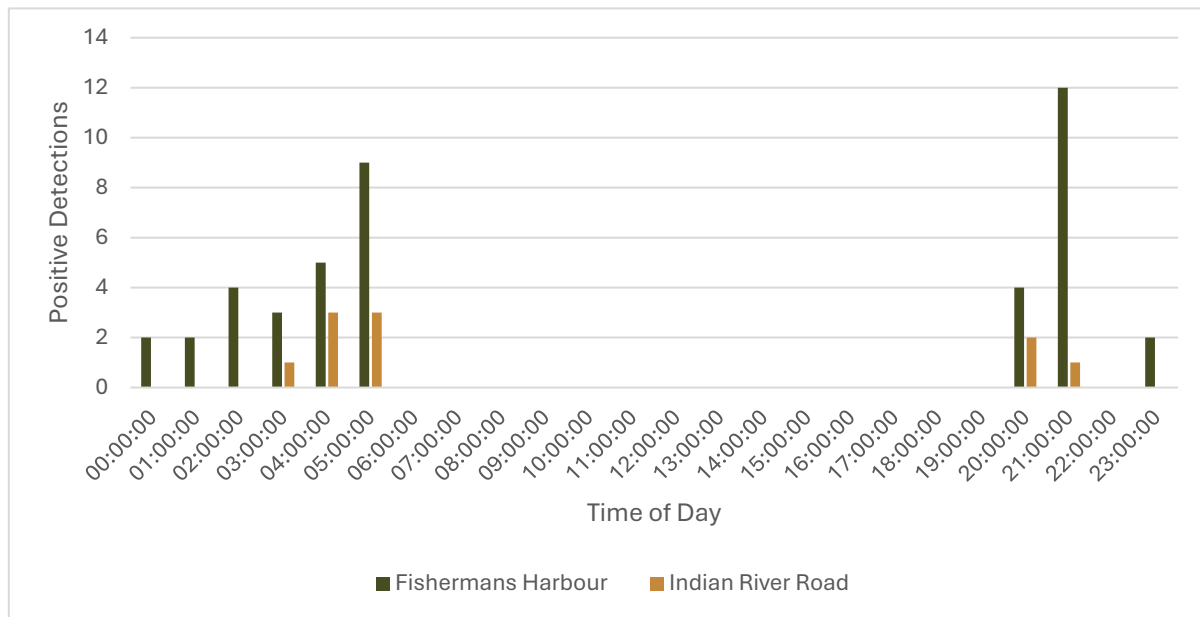


Figure 3.10: Timeframe of Positive Nighthawk Detections at FHBird1 and IRR Bird1 during the 2023 Summer Breeding Monitoring Period

2023 Fall Monitoring Period

Most of the confirmed positive detections made by FHBird1 during the fall monitoring period occurred in October (59%), with low detections in August and September due to high presence of external interferences (i.e., noise, insects) and the monitor's battery malfunction (Figure 3.11). In contrast, most of the confirmed positive detections made by IRRBird1 occurred in August (48%) and September (42%) before decreasing in October and November (Figure 3.11). In combining the results of both datasets, it is implied that fall migration occurred consistently across the fall months. This is expected as fall migration timing occurred more sporadically and prolonged than that of spring migration when birds have to compete for more resources to arrive to their migration destinations (Frei et al., 2024). It is assumed that FHBird1 would have seen similar trends to those of IRRBird1 had the monitor been functioning during August and September.

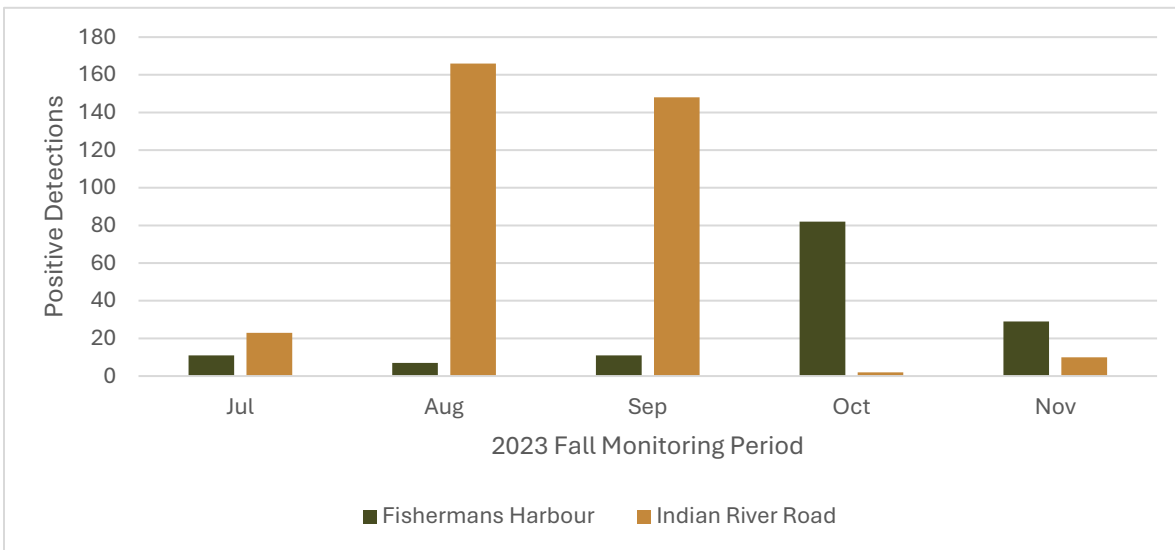


Figure 3.11: Positive Nighthawk Detections for FHBIRD1 and IRRBird1 during the 2023 Fall Monitoring Period

Most of the positive detections made by the IRRBird1 ARU occurred from 18:00 to 22:00 and from 06:00 to 08:00, with the highest detections occurring during the 07:00 to 08:00 timeframe (Figure 3.12). While the positive detections in the morning occurred close to the sunrise timeframe, detections in the evening are highest in the hours after sunset. In contrast, positive detections made by IRRBird1 occurred consistently throughout the monitoring timeframe, with the highest detections occurring in the 06:00 to 07:00 and 22:00 to 23:00 timeframe (Figure 3.12).

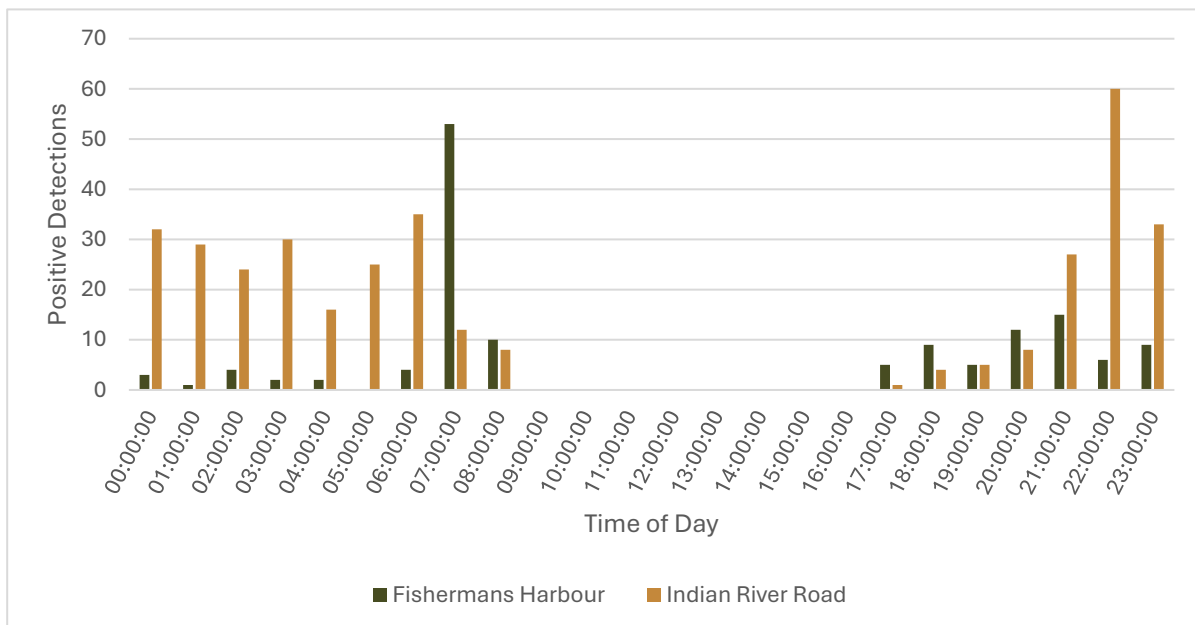


Figure 3.12: Timeframe of Positive Nighthawk Detections at FHBIRD1 and IRRBird1 during the 2023 Fall Monitoring Period

3.2.3 Species Richness

2023 Spring Monitoring Period

During the 2023 spring monitoring period, 19 unique species detected by the FHBird1 ARU were correctly identified by the model (Table 3.4). Of those, the most commonly detected species were black-and-white warbler (16), hermit thrush (16), and common yellowthroat (14). Two SAR, Canada warbler (10) and bobolink (2) were observed in late May, suggesting the migratory window for these species.

During the 2023 spring monitoring period, 15 unique species detected by the IRRBird1 ARU were correctly identified by the model (Table 3.4). Of those, the most commonly detected species were dark-eyed junco (49), greater yellowlegs (20), and white-throated sparrow (18). Canada warbler was the only SAR observed, with four occurrences identified in late May.

Table 3.4: Summary of Species Correctly Identified by Nighthawk at FHBird1 and IRRBird1 during the 2023 Spring Monitoring Period

Common Name	Scientific Name	COSEWIC Status	SARA Status	ESA Status	NS S-Rank
FHBird1					
American Redstart	<i>Setophaga ruticilla</i>	-	-	-	S5B
American Robin	<i>Turdus migratorius</i>	-	-	-	S5B,S5N
Black-and-white Warbler	<i>Mniotilta varia</i>	-	-	-	S5B
Black-billed Cuckoo	<i>Coccyzus erythrophthalmus</i>	-	-	-	S3B
Bobolink	<i>Dolichonyx oryzivorus</i>	Special Concern	Threatened	Vulnerable	S2S3B
Cape May Warbler	<i>Setophaga tigrine</i>	-	-	-	S3S4B, S4M
Canada Warbler	<i>Cardellina canadensis</i>	Special Concern	Threatened	Endangered	S2S3B
Chipping Sparrow	<i>Spizella passerina</i>	-	-	-	S4B
Common Yellowthroat	<i>Geothlypis trichas</i>	-	-	-	S5B
Dark-eyed Junco	<i>Junco hyemalis</i>	-	-	-	S5
Hermit Thrush	<i>Catharus guttatus</i>	-	-	-	S5B
Lincoln's Sparrow	<i>Melospiza lincolnii</i>	-	-	-	S4B
Northern Parula	<i>Setophaga americana</i>	-	-	-	S5B
Northern Waterthrush	<i>Parkesia noveboracensis</i>	-	-	-	S5B
Ovenbird	<i>Seiurus aurocapilla</i>	-	-	-	S5B
Red-breasted Nuthatch	<i>Sitta canadensis</i>	-	-	-	S5
Savannah Sparrow	<i>Passerculus sandwichensis</i>	-	-	-	S4B,S5M
Swainson's Thrush	<i>Catharus ustulatus</i>	-	-	-	S4B,S5M
White-throated Sparrow	<i>Zonotrichia albicollis</i>	-	-	-	S4S5B,S5M
IRRBird1					
American Redstart	<i>Setophaga ruticilla</i>	-	-	-	S5B
American Robin	<i>Turdus migratorius</i>	-	-	-	S5B,S5N
Black-and-white Warbler	<i>Mniotilta varia</i>	-	-	-	S5B
Canada Warbler	<i>Cardellina canadensis</i>	Special Concern	Threatened	Endangered	S2S3B

Common Name	Scientific Name	COSEWIC Status	SARA Status	ESA Status	NS S-Rank
Common Yellowthroat	<i>Geothlypis trichas</i>	-	-	-	S5B
Dark-eyed Junco	<i>Junco hyemalis</i>	-	-	-	S5
Greater Yellowlegs	<i>Tringa melanoleuca</i>	-	-	-	S3B,S4M
Hermit Thrush	<i>Catharus guttatus</i>	-	-	-	S5B
Nashville Warbler	<i>Leiothlypis ruficapilla</i>	-	-	-	S4B,S5M
Northern Parula	<i>Setophaga americana</i>	-	-	-	S5B
Northern Waterthrush	<i>Parkesia noveboracensis</i>	-	-	-	S5B
Ovenbird	<i>Seiurus aurocapilla</i>	-	-	-	S5B
Savannah Sparrow	<i>Passerculus sandwichensis</i>	-	-	-	S4B,S5M
Spotted Sandpiper	<i>Actitis macularius</i>	-	-	-	S4B
White-throated Sparrow	<i>Zonotrichia albicollis</i>	-	-	-	S4S5B,S5M

Source: (ACCD, 2026)

FHBird1 and IRRBird1 detected the highest number of unique species during the 2023 spring monitoring period (Figure 3.13). This pattern suggests peak migration movement occurring during this period.

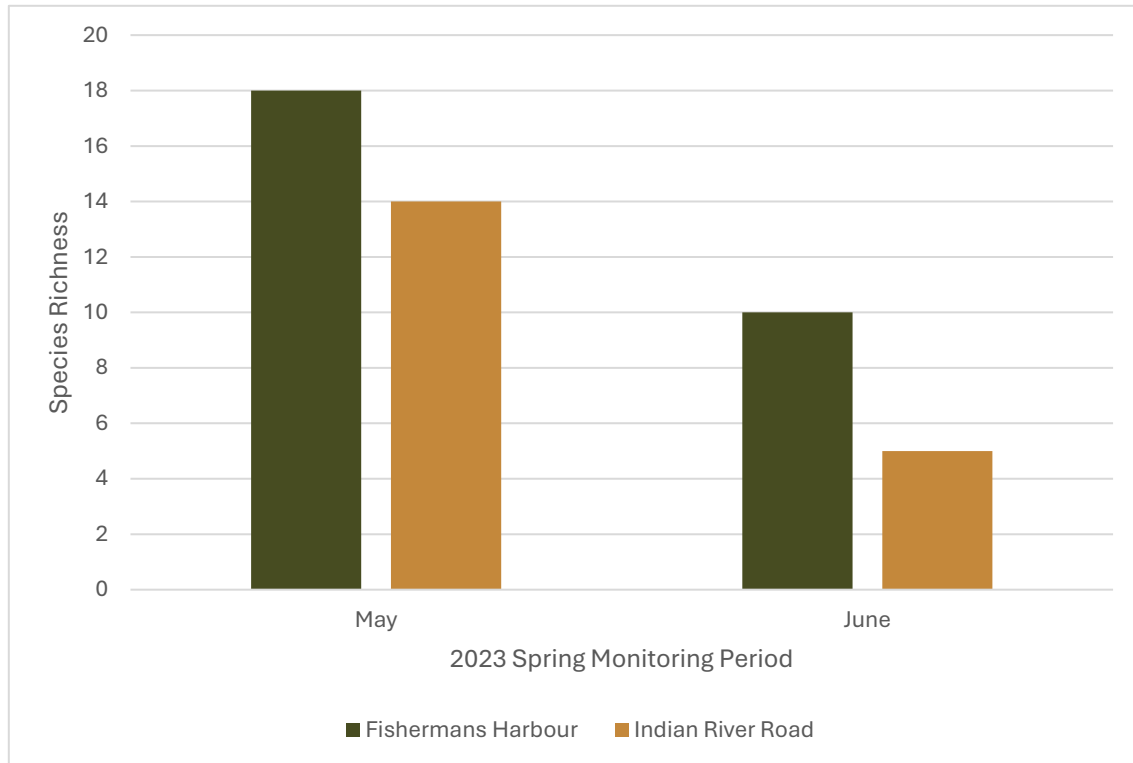


Figure 3.13: Nighthawk Species Richness detected in FHBird1 and IRRBird1 during the 2023 Spring Monitoring Period.

2023 Summer Breeding Monitoring Period

During the 2023 summer breeding monitoring period, 18 unique species detected by FHBird1 were correctly identified by the model (Table 3.5). Of those, the most commonly detected species were hermit thrush (8), greater yellowlegs (6), and black-and-white warbler (5). Canada warbler was the only SAR observed, with three occurrences identified around June 8. As the timing of these occurrences is within proximity to the occurrences during the spring monitoring period, it is assumed that these occurrences might be late spring migrants before the species fully move into displaying peak breeding activity.

During the 2023 summer breeding monitoring period, IRRBird1 detected three unique species (Table 3.5). Of those, the most commonly detected species was American robin (6). The other two species, greater yellowlegs (3) and solitary sandpiper (1) were shorebird occurrences that are unexpected as the monitor is outside of any proximity to the coast. No SAR were observed during this period.

Table 3.5: Summary of Species Correctly Identified by Nighthawk in FHBird1 and IRRBird1 during the 2023 Summer Breeding Monitoring Period

Common Name	Scientific Name	COSEWIC Status	SARA Status	ESA Status	NS S-Rank
FHBird1					
American Robin	<i>Turdus migratorius</i>	-	-	-	S5B,S5N
Black-and-white Warbler	<i>Mniotilta varia</i>	-	-	-	S5B
Black-billed Cuckoo	<i>Coccyzus erythrophthalmus</i>	-	-	-	S3B
Cape May Warbler	<i>Setophaga tigrine</i>	-	-	-	S3S4B, S4M
Canada Warbler	<i>Cardellina canadensis</i>	Special Concern	Threatened	Endangered	S2S3B
Common Yellowthroat	<i>Geothlypis trichas</i>	-	-	-	S5B
Dark-eyed Junco	<i>Junco hyemalis</i>	-	-	-	S5
Greater Yellowlegs	<i>Tringa melanoleuca</i>	-	-	-	S3B,S4M
Hermit Thrush	<i>Catharus guttatus</i>	-	-	-	S5B
Least Sandpiper	<i>Calidris minutilla</i>	-	-	-	S1S2B,S2S4M
Mourning Warbler	<i>Geothlypis Philadelphia</i>	-	-	-	S4B
Nashville Warbler	<i>Leiothlypis ruficapilla</i>	-	-	-	S4B,S5M
Northern Parula	<i>Setophaga americana</i>	-	-	-	S5B
Northern Waterthrush	<i>Parkesia noveboracensis</i>	-	-	-	S5B
Savannah Sparrow	<i>Passerculus sandwichensis</i>	-	-	-	S4B,S5M
Swainson's Thrush	<i>Catharus ustulatus</i>	-	-	-	S4B,S5M
White-throated Sparrow	<i>Zonotrichia albicollis</i>	-	-	-	S4S5B,S5M
Wood Thrush	<i>Hylocichla mustelina</i>	Threatened	Threatened	-	SUB
IRRBird1					
American Robin	<i>Turdus migratorius</i>	-	-	-	S5B,S5N
Greater Yellowlegs	<i>Tringa melanoleuca</i>	-	-	-	S3B,S4M
Solitary Sandpiper	<i>Tringa solitaria</i>	-	-	-	SUB,S3S4M

Source: (ACCDC, 2026)

In terms of species richness, FHBird1 detected the highest number of unique species in June whereas IRRBird1 detected the same number of unique species in the summer breeding monitoring period (Figure 3.14).

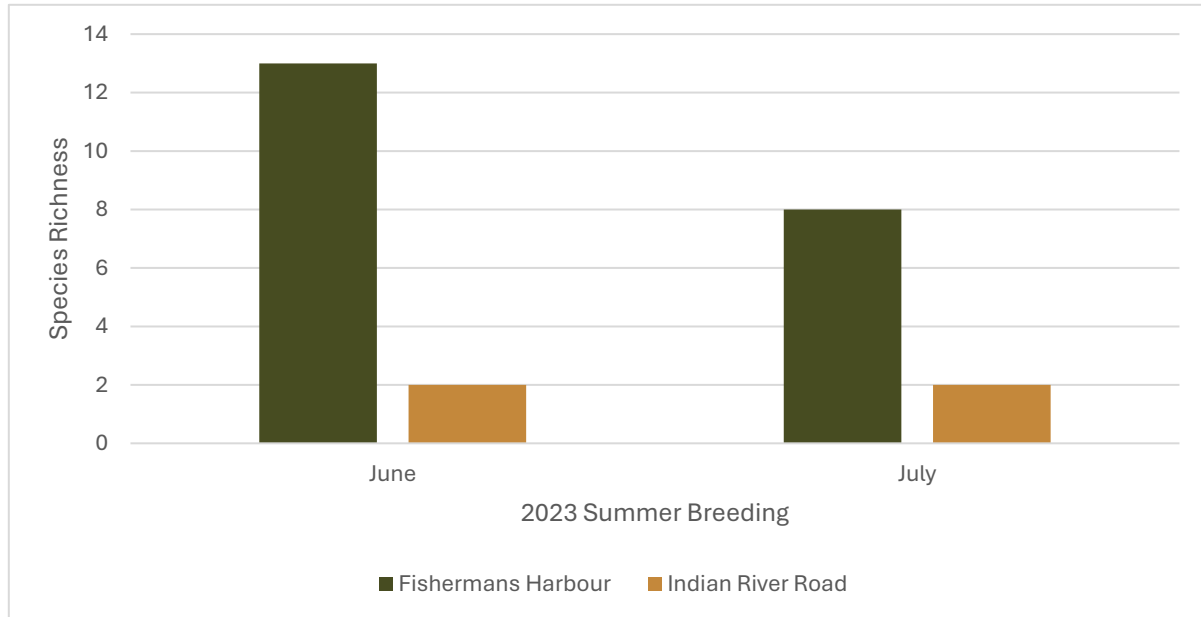


Figure 3.14: Nighthawk Species Richness in FHBird1 and IRRBird1 during the 2023 Summer Breeding Monitoring Period

2023 Fall Monitoring Period

During the 2023 fall monitoring period, 24 unique species detected by IRRBird1 were correctly identified by the model (Table 3.6). Of those, the most commonly detected species were American robin (26) and dark-eyed junco (24). No SAR were observed during this time. Notably, shorebird occurrences were higher during this time, including but not limited to greater yellowlegs, least sandpiper, solitary sandpiper, and spotted sandpiper (*Actitis macularius*); these species were detected in late July and early October. While occurrences are outside of the expected migratory window of shorebirds (August), their presence demonstrates that migratory species pass by the Study Area.

During the 2025 fall monitoring period, 30 unique species detected by the IRRBird1 were correctly identified by the model. Of those, the most commonly detected species were common yellowthroat (31), mourning warbler (31), and savannah sparrow (31) (Table 3.6). Canada warbler was the only SAR observed, with 21 occurrences identified in late August and early September. Similar to the FHBird1's findings, shorebird occurrences were high during this time, including but not limited to greater yellowlegs, grey-cheeked thrush (*Catharus minimus*), least sandpiper, semipalmated plover (*Charadrius semipalmatus*), solitary sandpiper, and spotted sandpiper. These occurrences implied peak migratory movements through the Study Area during this time.

Table 3.6: Summary of Species Correctly Identified by Nighthawk in FHBird1 and IRRBird1 during the 2023 Fall Monitoring Period

Common Name	Scientific Name	COSEWIC Status	SARA Status	ESA Status	NS S-Rank
FHBird1					
American Pipit	<i>Anthus rubescens</i>	-	-	-	S4M
American Redstart	<i>Setophaga ruticilla</i>	-	-	-	S5B
American Robin	<i>Turdus migratorius</i>	-	-	-	S5B,S5N
American tree sparrow	<i>Spizelloides arborea</i>	-	-	-	S4N
Black-and-white Warbler	<i>Mniotilta varia</i>	-	-	-	S5B
Chipping Sparrow	<i>Spizella passerina</i>	-	-	-	S4B
Common Yellowthroat	<i>Geothlypis trichas</i>	-	-	-	S5B
Dark-eyed Junco	<i>Junco hyemalis</i>	-	-	-	S5
Dickcissel	<i>Spiza americana</i>	-	-	-	SNA
Greater Yellowlegs	<i>Tringa melanoleuca</i>	-	-	-	S3B,S4M
Grey-cheeked Thrush	<i>Catharus minimus</i>	-	-	-	SUB
Hermit Thrush	<i>Catharus guttatus</i>	-	-	-	S5B
Indigo Bunting	<i>Passerina cyanea</i>	-	-	-	S1B,SUM
Least Sandpiper	<i>Calidris minutilla</i>	-	-	-	S1S2B,S2S4M
Lincoln's Sparrow	<i>Melospiza lincolni</i>	-	-	-	S4B
Northern Parula	<i>Setophaga americana</i>	-	-	-	S5B
Northern Waterthrush	<i>Parkesia noveboracensis</i>	-	-	-	S5B
Ovenbird	<i>Seiurus aurocapilla</i>	-	-	-	S5B
Palm Warbler	<i>Setophaga palmarum</i>	-	-	-	S5B
Savannah Sparrow	<i>Passerculus sandwichensis</i>	-	-	-	S4B,S5M
Solitary Sandpiper	<i>Tringa solitaria</i>	-	-	-	SUB,S3S4M
Spotted Sandpiper	<i>Actitis macularius</i>	-	-	-	S4B
Swainson's Thrush	<i>Catharus ustulatus</i>	-	-	-	S4B,S5M
White-throated Sparrow	<i>Zonotrichia albicollis</i>	-	-	-	S4S5B,S5M

Common Name	Scientific Name	COSEWIC Status	SARA Status	ESA Status	NS S-Rank
IRRBird1					
American Pipit	<i>Anthus rubescens</i>	-	-	-	S4M
American Robin	<i>Turdus migratorius</i>	-	-	-	S5B,S5N
American Tree Sparrow	<i>Spizelloides arborea</i>	-	-	-	S4N
Black-and-white Warbler	<i>Mniotilta varia</i>	-	-	-	S5B
Black-throated Blue Warbler	<i>Setophaga caerulescens</i>	-	-	-	S4B
Cape May Warbler	<i>Setophaga tigrine</i>	-	-	-	S3S4B, S4M
Canada Warbler	<i>Cardellina canadensis</i>	Special Concern	Threatened	Endangered	S2S3B
Chipping Sparrow	<i>Spizella passerina</i>	-	-	-	S4B
Chestnut-sided Warbler	<i>Setophaga pensylvanica</i>	-	-	-	S5B
Common Yellowthroat	<i>Geothlypis trichas</i>	-	-	-	S5B
Greater Yellowlegs	<i>Tringa melanoleuca</i>	-	-	-	S3B,S4M
Grey-cheeked Thrush	<i>Catharus minimus</i>	-	-	-	SUB
Hermit Thrush	<i>Catharus guttatus</i>	-	-	-	S5B
Least Sandpiper	<i>Calidris minutilla</i>	-	-	-	S1S2B,S2S4M
Mourning Warbler	<i>Geothlypis Philadelphia</i>	-	-	-	S4B
Nashville Warbler	<i>Leiothlypis ruficapilla</i>	-	-	-	S4B,S5M
Northern Parula	<i>Setophaga americana</i>	-	-	-	S5B
Northern Waterthrush	<i>Parkesia noveboracensis</i>	-	-	-	S5B
Ovenbird	<i>Seiurus aurocapilla</i>	-	-	-	S5B
Palm Warbler	<i>Setophaga palmarum</i>	-	-	-	S5B
Rose-breasted Grosbeak	<i>Pheucticus ludovicianus</i>	-	-	-	S3S4B
Savannah Sparrow	<i>Passerculus sandwichensis</i>	-	-	-	S4B,S5M
Semipalmated Plover	<i>Charadrius semipalmatus</i>	-	-	-	S1B,S3S4M
Short-billed Dowitcher	<i>Limnodromus griseus</i>	-	-	-	S3M
Solitary Sandpiper	<i>Tringa solitaria</i>	-	-	-	SUB,S3S4M

Common Name	Scientific Name	COSEWIC Status	SARA Status	ESA Status	NS S-Rank
Spotted Sandpiper	<i>Actitis macularius</i>	-	-	-	S4B
Veery	<i>Catharus fuscenscens</i>	-	-	-	S4S5B
White-throated Sparrow	<i>Zonotrichia albicollis</i>	-	-	-	S4S5B,S5M
Wilson's Warbler	<i>Cardellina pusilla</i>	-	-	-	S3B,S4M
Wood Thrush	<i>Hylocichla mustelina</i>	-	-	-	SUB

Source: (ACCD, 2026)

The FHBird1 have the highest number of unique species in October, followed by November and July (Figure 3.15). In contrast, the IRRBird1 detected the highest number of unique species in August and September, which is within the expected range of species richness in the fall monitoring period (Figure 3.15).

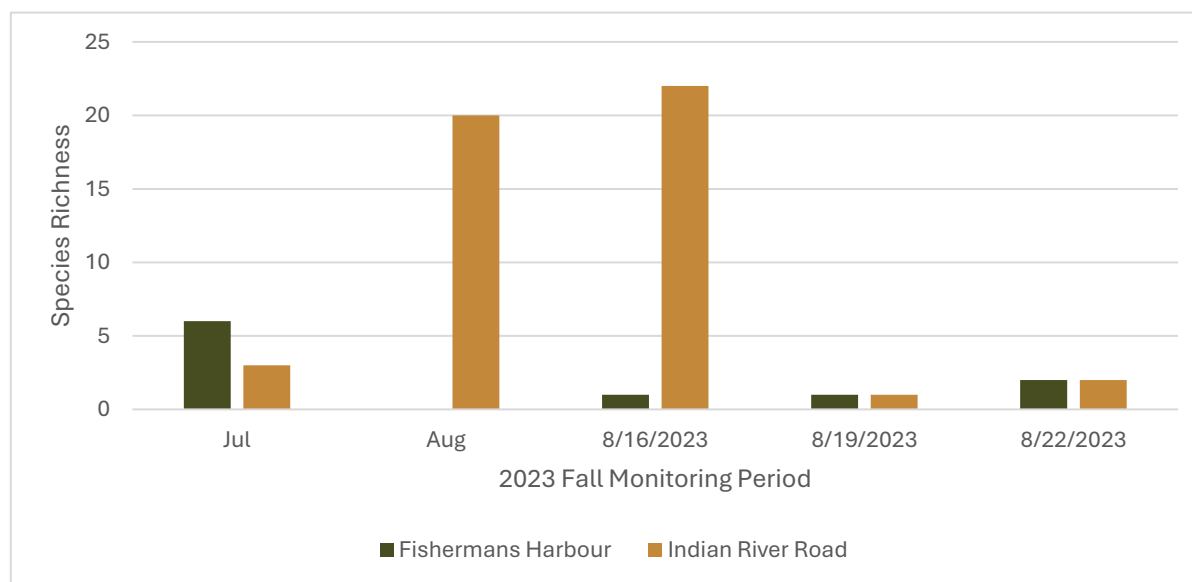


Figure 3.15: Nighthawk Species Richness in FHBird1 and IRRBird1 during the 2023 Fall Monitoring Period

3.2.4 Supplemental Observations

During the verification of acoustic recordings analyzed by Nighthawk, instances where the model either misidentified or missed species were documented. These supplemental observations, which included vocalizations like songs and calls or species not included in the Nighthawk model, were excluded from the primary data analysis to ensure consistency. Table 3.7 lists these species by date of observation.

Table 3.7: Supplemental Observations Identified within the ARU analyzed by Nighthawk in FHBird1 and IRRBird1

Date of Observation	Common Name
May 29, 2023	American Goldfinch
May 30, 2023	Downy Woodpecker
May 31, 2023	White-winged Crossbill
May 31, 2023	Purple Finch
May 31, 2023	White-winged Crossbill
May 31, 2023	Snow Bunting
May 31, 2023	Snow Bunting
June 7, 2023	White-winged Crossbill
June 10, 2023	Canada Warbler

Date of Observation	Common Name
June 25, 2023	Northern Saw-whet Owl
June 25, 2023	Northern Saw-whet Owl
July 11, 2023	Common Loon
July 14, 2023	Ruby-crowned Kinglet
July 15, 2023	Magnolia Warbler
July 15, 2023	Least Flycatcher
July 15, 2023	Canada Goose
July 15, 2023	Common Loon
July 25, 2023	Hermit Thrush
September 10, 2023	Black-throated Green Warbler
October 26, 2023	Ruby-crowned Kinglet
October 26, 2023	Common Loon
October 26, 2023	Palm Warbler
October 28, 2023	Palm Warbler
October 31, 2023	Magnolia Warbler
November 1, 2023	Lincoln's Sparrow
November 10, 2023	Common Yellowthroat
November 15, 2023	Whimbrel

4.0 DISCUSSION

4.1 Radar

The FH and IRR ARS units were deployed in the southwestern and northeastern portions of the Study Area respectively to capture the avian migration movements over the Project Area. The results of the 2023 radar monitoring campaign indicated two notable migration events during the summer breeding period and multiple relatively smaller migrations events in the early to mid-fall. These peaks occurred in mid-June (June 14 and 15) and mid-July (July 12), mid-September (September 12-14) and mid-November (November 19), suggesting that most migration activity within the Study Area occurred at these times. It is possible that large migration events may have also occurred during these down periods that were not recorded by the radar. It is also expected that migration events will become increasingly harder to predict as birds adapt to changing weather conditions and climate change (Burnside et al., 2021; La Sorte & Fink, 2017; Nilsson, Klaassen, Alerstam, et al., 2013).

4.1.1 Cues for Avian Migration

Several cues for migratory movements were analyzed to determine possible correlations to migratory timing. The results of this report suggest that favorable winds were a predictive factor for when avian species migrate through the Study Area. Most migration activity occurred when wind speeds were low, with birds also seeming to prefer flying when winds were moving from

south to north. The fact that this pattern was consistent across both ARS units throughout the entirety of the 2023 monitoring period indicates that birds flying in the Study Area do not appear to show any seasonal distinction on wind selection.

Seasonal temperature changes may be a trigger for species to begin their migrations (Brisson-Curadeau et al., 2020). This report found that the number of BTs detected spiked once temperatures stabilized above 10°C and that the beginning of fall migration aligned with a distinct and quick drop in temperature. The influence of lunar cycle was less prevalent throughout the 2023 monitoring campaign as large numbers of targets were detected when there little exposed moonlight. These findings were partially consistent with the findings of other studies that examined the effects of weather and atmospheric conditions on bird migrations.

4.1.2 Migratory Bird Density

The ARS target count within height bins and target density for the 2023 monitoring period indicated very low levels of interaction between migratory avifauna and the Project overall. Avifauna flying at heights between 38 m to 221 m would potentially be within the rotor swept area and at risk of interacting with the turbine. Approximately 2% of targets observed by the FH ARS and 5% of targets observed by IRR ARS were detected within the interaction corridor during the entirety of the 2023 monitoring period.

While there was a relatively large proportion of targets observed by the IRR ARS within the rotor swept area during the spring monitoring period, the actual number of target detections was quite low in comparison to the total number of targets detected during the summer and fall. In addition, while there were periods where each ARS unit was offline, migrating birds tend to not make many acute adjustments over 200 m to the altitude at which they are flying (Bowlin et al. 2015; Norevik et al. 2021); therefore, the risk of interaction with the turbine blades would likely have not changed during the each ARS's inactive periods.

4.1.3 Avian Interaction Model

Studies that examined interactions between wind turbines and avifauna have determined the level of avian mortality caused by wind turbines to be low (Zimmerling et al., 2013). These studies are consistent with several post-construction avian mortality monitoring programs conducted by Strum at operational wind power projects within Atlantic Canada over the past decade (i.e., approximately one detectable bird mortality per wind turbine per year on average). The MBII model projection indicates that interactions between birds and wind turbines would be low and would have occurred on a few nights during the 2023 monitoring period. These predicted low interaction levels indicate that the level of avian mortality caused by the Project would be low for most of the Project's operation, and mortality events would be limited to a few events during the migration periods.

4.2 **Acoustics**

Acoustic monitoring provides a simple and reliable passive data collection method that supplements field surveys. Data was collected in a standardized manner by using the same

equipment, at the same time of day, and in the same location. This standardization generates a presence-absence indicator, which enables the tracking of environmental changes in a reliable way. Acoustic monitoring, along with field assessments, allows for a better overall understanding of avian abundance and species richness within the FHBird1 and IRRBird1.

4.2.1 Detection of Vocalizations

The results of the 2023 ARU monitoring period show vocalizations in peak migratory periods for most avian species, with FHBird1 observing highest positive detections in May and October and IRRBird1 observing highest positive detections in May, August, and September. The fall monitoring periods saw more distributed detections over several months, suggesting that fall migration occurred less rapidly than that of spring migration (Nilsson, Klaassen, & Alerstam, 2013). Environmental factors such as temperature, wind speed and direction, and photoperiod may have also affected migration arrival (Assadi & Fraser, 2021; Brisson-Curadeau et al., 2020; Helm & Liedvogel, 2024; Robart et al., 2018, 2019). While FHBird1 did not capture the full August and September periods, it is assumed that the species abundance would have been comparable to IRRBird1 due to the former's proximity to the coast of Eastern NS. Similarly, migration has become more complex to predict annually due to warming temperatures and climate change (Burnside et al., 2021). Nonetheless, the species abundance and timing detected in FHBird1 and IRRBird1 demonstrate visible usage and migratory movement over the Study Area.

Throughout the 2023 monitoring period, both FHBird1 and IRRBird1 detected high vocalizations during sunset and sunrise hours of most evenings, which support theories that bird migration increased during nighttime around these hours (Evens et al., 2020). Deviations in detections outside of the expected timeframes can be the result of fluctuating migration conditions or changes in sunset/sunrise times (Åkesson et al., 2026; Sivakumar et al., 2025). Both FHBird1 and IRRBird1 support assumptions that birds mostly displayed NFCs during nighttime, and these increased in peak migratory seasons. Efforts were made to reduce hours when songs and calls were most prevalent in the datasets.

4.2.2 Species Richness

Species richness was relatively consistent throughout both FHBird1 and IRRBird1 monitoring periods, with species composition highest in May, August, September, and October due to proximity to most avian species' migratory periods. The decrease in detections and species richness after June 6 and before July 15 is expected given that this period is associated with peak breeding season where birds produce more songs and calls to which the Nighthawk model does not contain the capacity to identify. With species producing more NFCs during peak migratory seasons, the patterns seen in both FHBird1 and IRRBird1 datasets support expectations that the months when species richness were highest are correlated with potential migratory movements.

Species richness also helps showcase avian species present within the Study Area, which may guide management plans for any SAR detected during the monitoring period. In particular, Canada warbler and bobolink were observed, with Canada warbler observed in both datasets.

Observations of Canada warbler was concentrated from late May to early June in the spring and late August to early September in the fall, implying that the species may migrate through the Study Area. Similarly, bobolink was detected in late May, suggesting some migratory movements through the Study Area.

Shorebird presence was also noted throughout the monitoring period, with both monitors detecting shorebirds in months when peak migratory movements for these species are expected to occur. In particular, these species were detected in late May, late August, early September and late October, suggesting consistent migratory movements passing through the Study Area. As FHBird1 is within 5 km of the coast, shorebird presence and movements are expected to occur near the Study Area.

4.3 General avian migration trends

The ARS and ARU were deployed in tandem in the Study Area to potentially correlate their assessment in identifying target populations and species composition of avian migrants. However, these correlations do not represent confirmed observations of species and migratory movements due in part to the detection range of the ARU being significantly lower than that of the ARS. ARS can capture targets at distances 2,000 m to 3,000 m away, while ARU can identify targets at up to 1000 m. No correlation statistics were completed for radar and acoustic data. However, some noticeable observations were made and are discussed in this section.

Radar results captured high peak spring migratory activity in late May and early June, which coincided with the high detections seen in both FHBird1 and IRRBird1 during the 2023 spring monitoring period. This suggests that species composition observed by the ARUs during this period may have contributed to the migratory patterns captured by the ARS. During the summer breeding period, both ARS units detected numerous BTs on July 12 as well as other spikes in avian activity in mid-June and early July. These peaks were not detected by either of the acoustic monitors, though this may be because breeding birds do not produce the NFCs that would be detected by the acoustic monitors (Winger et al., 2019). During the fall monitoring the radar systems detected consistently large numbers of BTs in August and mid-September with BTs also detected occasionally in October. These peaks coincide with the high number of NFCs in August, September and October as well as the high richness of species recorded during those months.

Reasons for an inexact temporal alignment between ARS and ARU observations are likely due to several factors, including detection range and weather conditions. An ARS system has a much greater detection range than an acoustic monitor, which can allow it to observe more migrants as they fly over the Project. Additionally, certain weather conditions are more favorable for acoustic sampling than radar. For example, low level clouds, or light rain conditions can force migratory birds closer to the ground. Migrants closer to the ground are more readily heard in acoustic sampling. Furthermore, migrants navigating through conditions of reduced visibility may create more calls to aid in their migration. These same weather conditions can prove difficult for the ARS, which is unreliable in detecting birds against significant cloud cover.

5.0 SUMMARY

5.1 Radar

The FH and IRR ARS units were able to capture several peak BT detection events during the 2023 monitoring period:

- Peak spring migratory activity occurred in late April and early June. Overall, the number of BTs detected by both radar units during the spring migratory period were notably lower than what was detected during the summer breeding and fall migratory periods.
- BTs were consistently detected throughout the summer breeding period and peaked in early June and mid-July
- Peak fall migrations occurred in August as well as early to mid-September. Few BTs were detected after September as birds may have migrated south because of decreasing temperatures
- Wind speed appeared to have a greater influence on migration activity than wind direction.

5.2 Acoustics

The 2023 monitoring period detected 39 unique species across FHBird1 and IRRBird1, with two SAR identified. Some patterns were observed during the monitoring period that was reported.

- Based on the manually verified NFCs detection made by Nighthawk, peak migration activity occurred in May during spring migration and in August, September, and October during fall migration. These months had more positive detections than in any other month during their coinciding monitoring period (24% for IRRBird1 and 27% for FHBird1 in May, 64% for IRRBird1 and 35% for FHBird1 in August, September and October).
- Canada warbler and bobolink were the two SAR detected in the 2023 monitoring period. Canada warbler was observed during both migration seasons and bobolink was observed in May.
- Six shorebird species were positively detected during the NFC verification, these include greater yellowlegs, least sandpiper, semipalmated plover, short-billed dowitcher, solitary sandpiper, and spotted sandpiper, with all species identified during typical shorebird migration windows. The Study Area is within 10 km of the coast along the eastern shore of Nova Scotia, which may overlap with migratory paths of shorebird species.

5.3 Notable Migration Times

Notable migration times were determined from reviewing a combination of radar and acoustic data from the ARS and ARU monitoring periods. These notable time periods aimed to be broad to capture general trends, but peak dates are mentioned to highlight potential timing for monitoring efforts aimed at reducing interactions.

- Spring
 - Late May (May 20 to 31) to early June (before June 6)
- Fall
 - Late August (August 20 to 31)
 - Early to mid-September (September 1 to 12)
 - Late October (October 20 to 31)

6.0 LIMITATIONS

6.1.1 Radar Data

Data collected by the avian radar helps provide useful data that can provide a greater understanding of migration events over the area of a proposed wind project as well as the magnitude of such movements. Data collected from the radar can also be used to determine the heights at which avian species tend to travel at during migration events and the potential risk of interactions with turbine blades. However, while most targets detected by the radars are assumed to be migratory birds, some targets may also be insects, bats or ground interference. The radar can also confuse precipitation with BTs, therefore days with large amounts of rain or snowfall were omitted from data analysis for this Project. While avian flight activity is generally reduced during periods of rainfall, avian species may still fly during these periods, but will not be accurately recorded by the radar (Gordo, 2007).

While the Simrad Halo 20 radar is useful for detecting individual BTs, it cannot infer the size of the target or any additional information on the species detected. Acoustic and field surveys are therefore often necessary to supplement radar surveys to gain a greater understanding of which species the radars are detecting.

For the radars to determine if a detected target is a bird that target must stay in the radar's detection field for an extended period (approximately 4 seconds). Therefore, birds that only fly into the detection field momentarily will likely not be recorded by the radar. The duration that a target needs to be in the detection field for it to be considered a target can be reduced depending on the scope of the proposed project and location of the radar however, reducing the duration increases the likelihood of non avian targets being detected and recorded.

6.1.2 Nighthawk

The Nighthawk model was designed for the detection and identification of avian NFCs; however, not all birds migrate nocturnally. Finches, blackbirds, corvids, and swallows are examples of birds that primarily migrate during the day and may therefore go undetected by the model (Van Doren et al., 2023). It is assumed that these gaps will be filled using field surveys within the Study Area.

While some species' NFCs are distinctive, others can be very difficult to discern. In some instances, NFCs cannot be identified with certainty by models or by the human ear. The Nighthawk model attempts to address this limitation by identifying on a broader level (e.g., to the group, family, or order level) when it cannot confidently identify a nocturnal flight call to species level.

Furthermore, Nighthawk often attempts (unsuccessfully) to classify daytime songs and calls as NFCs. This is a common source of error near sunset and sunrise, when many birds are still actively singing. Noise from non-target sources may also impact the functionality of the model. Calls made by spring peeper frogs, for example, sound very similar to the nocturnal flight call of the Swainson's thrush and can mislead the model. Anthropogenic and environmental noise can also affect the model's accuracy.

The makers of Nighthawk preprogrammed the model with a set list of species it is capable of accurately detecting (82 species in total), and since this list cannot be manually modified, species cannot be added or removed. Common nighthawk (*Chordeiles minor*) is an example of a species that was missing from the preprogrammed Nighthawk list and could not be added manually.

7.0 STATEMENT OF QUALIFICATIONS AND LIABILITY

This Report (the "Report") has been prepared by Strum Consulting (the "Consultant") for the benefit of EverWind NS Holdings Ltd. and Membertou Development Corporation (the "Client") in accordance with the agreement between the Consultant and Client, including the scope of work detailed therein (the "Agreement").

The information, data, recommendations, and conclusions contained in the Report (collectively, the "Information"):

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- represents the Consultant's professional judgement in light of the Limitations and industry standards for the preparation of similar reports.
- may be based on information provided to the Consultant which has not been independently verified.
- has not been updated since the date of issuance of the Report and its accuracy is limited to the time period and circumstances in which it was collected, processed, made or issued.
- must be read as a whole and sections thereof should not be read out of such context.
- was prepared for the specific purposes described in the Report and the Agreement.
- in the case of subsurface, environmental, or geotechnical conditions, may be based on limited testing and on the assumption that such conditions are uniform and not variable either geographically or over time.

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- as required by law
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Should additional information become available, Strum requests that this information be brought to our attention immediately so we may re-assess the conclusions presented in this report. This report was prepared by Connor Nishikawa, Environmental Scientist, and Polly Nguyen, Environmental Scientist, and was reviewed by Mark MacDonald, Senior Environmental Scientist.

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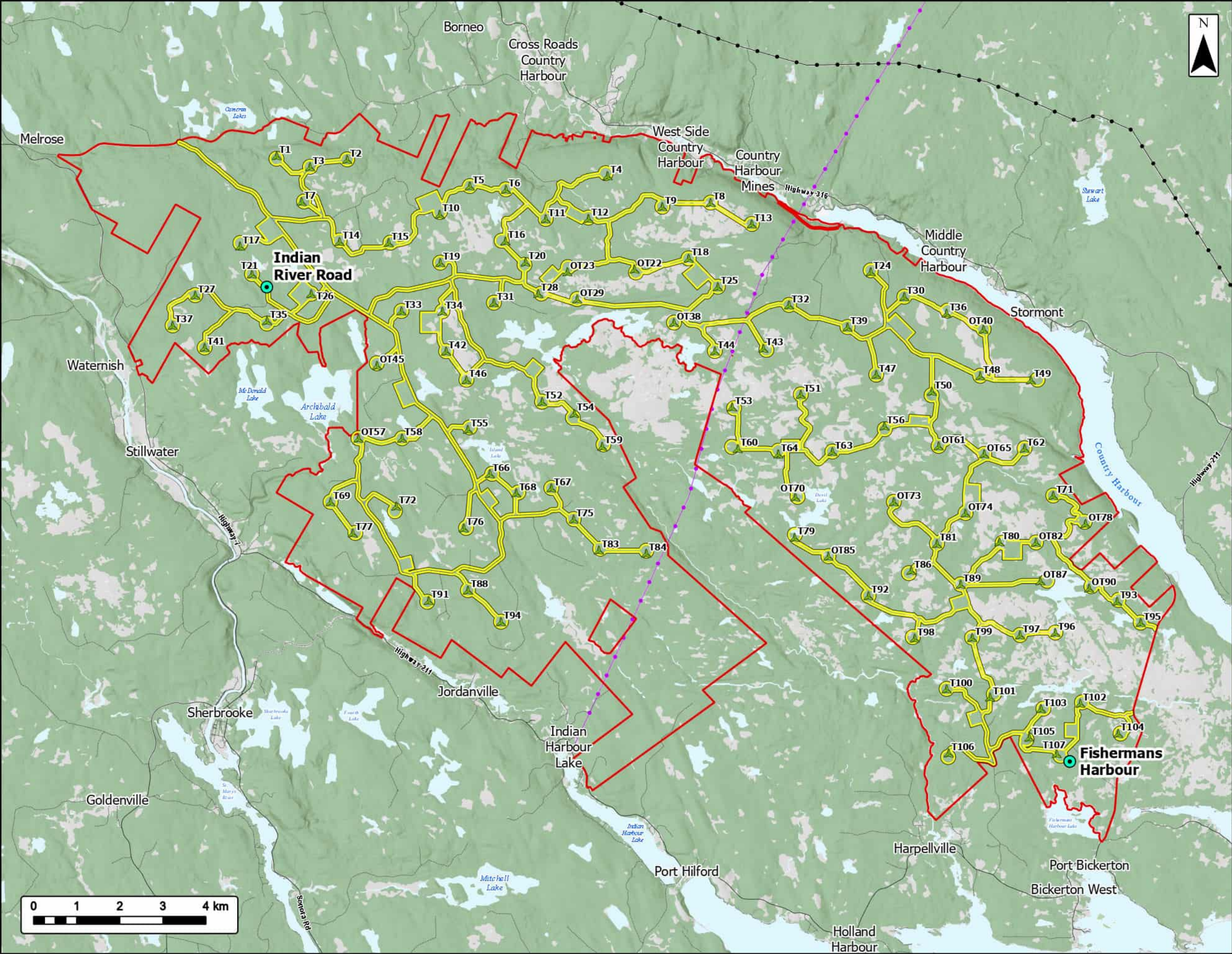
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APPENDIX A
DRAWING



Harbour Hills Wind Project

Avian Radar and Acoustic Monitor Locations

Study Area

Assessment Area

Proposed Turbine Locations

Avian Radar (ARS) and Acoustic Monitor (ARU) Location

Transportation

Road

Unpaved Road

Utilities (Line)

Existing Pipeline

Existing Transmission Lines

Water Features

Mapped Lakes and Rivers

Coordinate System: NAD 1983 UTM Zone 20N
Sources: Service Nova Scotia, Esri, NASA, NGA, USGS, GeoNOVA, SNSIS, NSNRR, ACCDC, ISA Canada, CNWL, HERE, Garmin, USGS

Date:	2026-06-12	Project #:	25-11682
Scale:	1:85,000	Drawing #:	1
Drawn By:	K. Wallace		
Checked By:	A. Doane		

APPENDIX B
DATA TABLES

Table 1: Fisherman's Harbour 2023 Radar Results - Harbour Hills Wind Project

Project # 25-11682

Date	0-25	25-50	50-100	100-150	150-200	200-250	250-500	500-1000	1000-1500	1500-2000	2000-3000	Total
2023-07-16	0	0	0	0	0	0	0	0	0	0	0	0
2023-07-17	0	0	0	0	0	0	0	0	0	0	0	0
2023-07-18	0	0	0	1	1	0	6	9	1	1	0	19
2023-07-19	0	0	0	0	0	0	0	0	0	0	0	0
2023-07-20	0	0	0	0	0	0	0	0	0	0	0	0
2023-07-21	0	0	0	0	0	0	0	0	0	0	0	0
2023-07-22	0	0	0	0	0	0	0	0	0	0	0	0
2023-07-23	0	0	0	0	0	0	0	0	0	0	0	0
2023-07-24	0	0	0	0	0	0	0	0	0	0	0	0
2023-07-25	0	0	0	0	0	0	0	0	0	0	0	0
2023-07-26	0	0	0	0	0	0	0	0	0	0	0	0
2023-07-27	0	0	0	0	0	0	0	0	0	0	0	0
2023-07-28	0	0	0	2	6	5	181	341	125	29	0	689
2023-07-29	0	0	0	0	0	0	0	0	0	0	0	0
2023-07-30	0	0	0	0	0	0	0	0	0	0	0	0
2023-07-31	0	0	0	0	0	0	0	0	0	0	0	0
2023-08-01	0	0	0	0	0	0	0	0	0	0	0	0
2023-08-02	0	0	0	0	0	0	0	0	0	0	0	0
2023-08-03	0	0	0	0	0	0	0	0	0	0	0	0
2023-08-04	0	0	0	0	0	0	0	0	0	0	0	0
2023-08-05	0	0	0	0	0	0	0	0	0	0	0	0
2023-08-06	0	0	0	0	0	0	0	0	0	0	0	0
2023-08-07	0	0	0	0	0	0	0	0	0	0	0	0
2023-08-08	0	0	0	0	0	0	0	0	0	0	0	0
2023-08-09	0	0	0	0	0	0	0	0	0	0	0	0
2023-08-10	0	0	0	0	0	0	0	0	0	0	0	0
2023-08-11	0	0	0	0	0	0	2	1	1	0	0	4
2023-08-12	0	0	0	0	0	0	0	0	0	0	0	0
2023-08-13	0	0	0	0	0	0	0	0	0	0	0	0
2023-08-14	0	0	2	6	3	2	54	226	119	20	0	432
2023-08-15	0	0	0	0	0	0	0	0	0	0	0	0
2023-08-16	0	0	0	0	0	0	0	0	0	0	0	0
2023-08-17	0	0	0	0	0	0	0	0	0	0	0	0
2023-08-18	0	0	2	2	0	0	22	38	10	3	0	77
2023-08-19	0	0	0	0	0	0	0	0	0	0	0	0
2023-08-20	0	0	0	0	0	0	0	0	0	0	0	0
2023-08-21	0	0	0	0	0	0	0	0	0	0	0	0
2023-08-22	0	0	0	0	0	0	0	0	0	0	0	0
2023-08-23	0	0	0	0	0	0	0	0	0	0	0	0
2023-08-24	0	0	0	0	0	0	0	0	0	0	0	0
2023-08-25	0	0	0	0	0	0	0	0	0	0	0	0
2023-08-26	0	0	0	0	0	0	0	0	0	0	0	0
2023-08-27	0	0	0	0	0	0	0	0	0	0	0	0

Table 1: Fisherman's Harbour 2023 Radar Results - Harbour Hills Wind Project

Project # 25-11682

Date	0-25	25-50	50-100	100-150	150-200	200-250	250-500	500-1000	1000-1500	1500-2000	2000-3000	Total
2023-08-28	0	0	0	0	0	0	0	0	0	0	0	0
2023-08-29	0	0	0	0	0	0	0	0	0	0	0	0
2023-08-30	0	0	0	0	0	0	0	0	0	0	0	0
2023-08-31	0	0	0	0	0	0	0	0	0	0	0	0
2023-09-01	0	0	0	0	0	0	0	0	0	0	0	0
2023-09-02	0	0	0	0	0	0	0	0	0	0	0	0
2023-09-03	0	0	0	0	0	0	0	0	0	0	0	0
2023-09-04	0	0	0	0	0	0	0	0	0	0	0	0
2023-09-05	0	0	0	0	0	0	0	0	0	0	0	0
2023-09-06	0	0	0	0	0	0	0	0	0	0	0	0
2023-09-07	0	0	0	0	0	0	10	15	3	0	0	28
2023-09-08	0	0	0	0	0	0	0	0	0	0	0	0
2023-09-09	0	0	0	0	0	0	0	0	0	0	0	0
2023-09-10	0	0	0	0	0	0	0	0	0	0	0	0
2023-09-11	0	0	0	0	0	0	0	0	0	0	0	0
2023-09-12	0	0	0	0	0	0	0	0	0	0	0	0
2023-09-13	0	0	0	0	0	0	0	0	0	0	0	0
2023-09-14	0	0	2	17	24	24	264	639	309	80	0	1359
2023-09-15	0	0	0	0	0	0	0	0	0	0	0	0
2023-09-16	0	0	0	0	0	0	0	0	0	0	0	0
2023-09-17	0	0	0	0	0	0	0	0	0	0	0	0
2023-09-18	0	0	0	0	0	0	0	0	0	0	0	0
2023-09-19	0	0	0	0	0	0	0	0	0	0	0	0
2023-09-20	0	0	0	0	0	0	0	0	0	0	0	0
2023-09-21	0	0	0	0	0	0	0	0	0	0	0	0
2023-09-22	0	0	0	0	0	0	0	0	0	0	0	0
2023-09-23	0	0	0	0	0	0	0	0	0	0	0	0
2023-09-24	0	0	0	0	0	0	0	0	0	0	0	0
2023-09-25	0	0	0	3	2	5	18	91	61	28	0	208
2023-09-26	0	0	0	0	0	0	0	0	0	0	0	0
2023-09-27	0	0	0	0	0	0	0	0	0	0	0	0
2023-09-28	0	0	0	0	0	0	0	0	0	0	0	0
2023-09-29	0	0	0	0	0	0	0	0	0	0	0	0
2023-09-30	0	0	0	0	0	0	0	0	0	0	0	0
2023-10-01	0	0	0	0	0	0	0	0	0	0	0	0
2023-10-02	0	0	0	0	0	0	0	0	0	0	0	0
2023-10-03	0	0	0	0	0	0	0	0	0	0	0	0
2023-10-04	0	0	0	0	0	0	0	0	0	0	0	0
2023-10-05	0	0	0	0	0	0	0	0	0	0	0	0
2023-10-06	0	0	0	0	0	0	0	0	0	0	0	0
2023-10-07	0	0	0	0	0	0	0	0	0	0	0	0
2023-10-08	0	0	0	0	0	0	0	0	0	0	0	0
2023-10-09	0	0	0	0	0	0	0	0	0	0	0	0

Table 1: Fisherman's Harbour 2023 Radar Results - Harbour Hills Wind Project

Project # 25-11682

Date	0-25	25-50	50-100	100-150	150-200	200-250	250-500	500-1000	1000-1500	1500-2000	2000-3000	Total
2023-10-10	0	0	0	0	0	0	0	0	0	0	0	0
2023-10-11	0	0	0	0	0	0	0	0	0	0	0	0
2023-10-12	0	0	0	0	0	0	0	0	0	0	0	0
2023-10-13	0	0	0	0	0	0	0	0	0	0	0	0
2023-10-14	0	0	0	0	0	0	0	0	0	0	0	0
2023-10-15	0	0	0	0	0	0	0	0	0	0	0	0
2023-10-16	0	0	0	0	0	0	0	0	0	0	0	0
2023-10-17	0	0	0	0	0	0	0	0	0	0	0	0
2023-10-18	0	0	0	0	0	0	0	0	0	0	0	0
2023-10-19	0	0	0	0	0	0	0	0	0	0	0	0
2023-10-20	0	0	0	0	0	0	0	0	0	0	0	0
2023-10-21	0	0	0	0	0	0	0	1	0	0	0	1
2023-10-22	0	0	2	9	5	7	129	363	186	49	0	750
2023-10-23	0	0	0	0	0	0	0	0	0	0	0	0
2023-10-24	0	0	0	0	0	0	0	0	0	0	0	0
2023-10-25	0	0	0	0	0	0	0	0	0	0	0	0
2023-10-26	0	0	0	0	0	0	0	0	0	0	0	0
2023-10-27	0	0	0	0	0	0	0	0	0	0	0	0
2023-10-28	0	0	0	0	0	0	0	0	0	0	0	0
2023-10-29	0	0	0	0	0	0	0	0	0	0	0	0
2023-10-30	0	0	0	0	0	0	0	0	0	0	0	0
2023-10-31	0	0	0	0	0	0	0	0	0	0	0	0
2023-11-01	0	0	0	0	0	0	29	545	106	0	0	680
2023-11-02	0	0	0	0	0	0	0	0	0	0	0	0
2023-11-03	0	0	0	1	0	0	6	26	64	16	0	113
2023-11-04	0	0	0	0	0	0	0	0	0	0	0	0
2023-11-05	0	0	0	0	0	0	0	0	0	0	0	0
2023-11-06	0	0	0	0	0	0	0	0	0	0	0	0
2023-11-07	0	0	0	0	0	0	0	0	0	0	0	0
2023-11-08	0	0	0	0	0	0	0	0	0	0	0	0
2023-11-09	0	0	0	0	0	0	0	0	0	0	0	0
2023-11-10	0	0	0	0	0	0	0	0	0	0	0	0
2023-11-11	0	0	0	0	0	0	0	0	0	0	0	0
2023-11-12	0	0	1	3	1	1	5	0	0	0	0	11
2023-11-13	0	0	0	0	0	0	0	0	0	0	0	0
2023-11-14	0	0	0	0	0	0	0	0	0	0	0	0
2023-11-15	0	0	0	0	0	0	0	0	0	0	0	0
2023-11-16	0	0	0	0	0	0	0	0	0	0	0	0
2023-11-17	0	0	0	0	0	0	0	0	0	0	0	0
2023-11-18	0	0	0	0	0	0	0	0	0	0	0	0
2023-11-19	0	0	0	0	0	0	15	50	39	8	0	112
2023-11-20	0	0	0	0	0	0	0	0	0	0	0	0
2023-11-21	0	0	0	0	0	0	0	0	0	0	0	0

Table 1: Fisherman's Harbour 2023 Radar Results - Harbour Hills Wind Project**Project # 25-11682**

Date	0-25	25-50	50-100	100-150	150-200	200-250	250-500	500-1000	1000-1500	1500-2000	2000-3000	Total
2023-11-22	0	0	0	0	0	0	0	0	0	0	0	0
2023-11-23	0	0	0	0	0	0	0	0	0	0	0	0
2023-11-24	0	0	0	0	0	0	0	0	0	0	0	0
2023-11-25	0	0	0	0	0	0	0	0	0	0	0	0
2023-11-26	0	0	0	0	0	0	0	0	0	0	0	0
2023-11-27	0	0	0	0	0	0	0	0	0	0	0	0

Table 2: Indian River Road 2023 Radar Results - Harbour Hills Wind Project

Project # 25-11682

Date	0-25	25-50	50-100	100-150	150-200	200-250	250-500	500-1000	1000-1500	1500-2000	2000-3000	Total
2023-04-11	0	0	0	0	0	0	0	0	0	0	0	0
2023-04-12	0	0	0	0	0	0	0	0	0	0	0	0
2023-04-13	0	0	0	0	0	0	0	0	0	0	0	0
2023-04-14	0	0	3	0	0	0	0	0	0	0	0	3
2023-04-15	0	0	3	0	0	0	0	0	0	0	0	3
2023-04-16	0	0	19	0	0	0	0	0	0	0	0	19
2023-04-17	0	0	3	0	0	0	0	0	0	0	0	3
2023-04-18	0	0	0	0	0	0	0	0	0	0	0	0
2023-04-19	0	0	0	0	0	0	0	0	0	0	0	0
2023-04-20	0	0	0	0	0	0	0	0	0	0	0	0
2023-04-21	0	0	0	0	0	0	0	0	0	0	0	0
2023-04-22	0	0	0	0	0	0	0	0	0	0	0	0
2023-04-23	0	0	0	0	0	0	0	0	0	0	0	0
2023-04-24	0	0	0	0	0	0	0	0	0	0	0	0
2023-04-25	0	0	0	0	0	0	0	0	0	0	0	0
2023-04-26	0	0	0	0	0	0	0	0	0	0	0	0
2023-04-27	0	0	14	0	0	0	0	0	0	0	0	14
2023-04-28	0	0	1	0	0	0	0	0	0	0	0	1
2023-04-29	0	0	5	0	0	0	0	0	0	0	0	5
2023-04-30	0	0	47	0	0	0	0	0	0	0	0	47
2023-05-01	0	0	2	0	0	0	0	0	0	0	0	2
2023-05-02	0	0	0	0	0	0	0	0	0	0	0	0
2023-05-03	0	0	5	0	0	0	0	0	0	0	0	5
2023-05-04	0	0	16	0	0	0	0	0	3	0	0	19
2023-05-05	0	0	3	0	0	0	0	0	0	0	0	3
2023-05-06	0	0	0	0	0	0	0	0	0	0	0	0
2023-05-07	0	0	9	0	0	0	0	0	0	0	0	9
2023-05-08	0	0	3	0	0	0	0	1	1	1	0	6
2023-05-09	0	0	0	0	0	0	0	0	0	0	0	0
2023-05-10	0	0	1	0	0	0	0	0	0	0	0	1
2023-05-11	0	0	3	0	0	0	0	0	0	0	0	3
2023-05-12	0	0	0	0	0	0	0	0	0	0	0	0
2023-05-13	0	0	0	0	0	0	0	0	0	0	0	0
2023-05-14	0	0	9	0	0	0	0	0	0	0	0	9
2023-05-15	0	0	0	0	0	0	0	0	0	0	0	0
2023-05-16	0	0	0	0	0	0	0	0	0	0	0	0
2023-05-17	0	0	0	0	0	0	0	0	0	0	0	0
2023-05-18	0	0	0	0	0	0	0	0	0	0	0	0
2023-05-19	0	0	0	0	0	0	0	0	0	0	0	0
2023-05-20	0	0	0	0	0	0	0	0	0	0	0	0
2023-05-21	0	0	1	0	0	0	11	41	8	1	0	62
2023-05-22	0	0	1	0	0	0	0	0	0	0	0	1

Table 2: Indian River Road 2023 Radar Results - Harbour Hills Wind Project

Project # 25-11682

Date	0-25	25-50	50-100	100-150	150-200	200-250	250-500	500-1000	1000-1500	1500-2000	2000-3000	Total
2023-05-23	0	0	0	0	0	0	0	0	0	0	0	0
2023-05-24	0	0	0	0	0	0	0	0	0	0	0	0
2023-05-25	0	0	1	0	0	0	0	0	0	0	0	1
2023-05-26	0	0	0	0	0	0	0	0	0	0	0	0
2023-05-27	0	0	0	0	0	0	0	0	0	0	0	0
2023-05-28	0	0	0	0	0	0	0	0	0	0	0	0
2023-05-29	0	0	0	0	0	0	0	0	0	0	0	0
2023-05-30	0	0	0	0	0	0	0	0	0	0	0	0
2023-05-31	0	0	0	0	0	0	0	0	0	0	0	0
2023-06-01	0	0	0	0	0	0	0	0	0	0	0	0
2023-06-02	0	0	0	0	0	0	0	0	1	0	0	1
2023-06-03	0	0	0	0	1	1	7	27	2	0	0	38
2023-06-04	0	0	0	0	0	0	0	0	0	0	0	0
2023-06-05	0	0	0	0	0	0	0	0	0	0	0	0
2023-06-06	0	0	1	1	0	0	2	15	7	1	0	27
2023-06-07	0	0	0	0	0	0	0	0	0	0	0	0
2023-06-08	0	0	0	0	0	0	0	0	0	0	0	0
2023-06-09	0	0	4	9	5	3	45	169	73	17	0	325
2023-06-10	0	0	0	0	0	0	0	0	0	0	0	0
2023-06-11	0	0	0	0	0	0	0	0	0	0	0	0
2023-06-12	0	0	0	0	0	0	0	0	0	0	0	0
2023-06-13	0	0	0	0	0	0	0	0	0	0	0	0
2023-06-14	0	0	0	0	0	0	0	0	0	0	0	0
2023-06-15	0	0	1	5	13	10	65	138	68	16	0	316
2023-06-16	0	0	0	0	0	0	0	0	0	0	0	0
2023-06-17	0	0	0	0	0	0	0	0	0	0	0	0
2023-06-18	0	0	0	0	0	0	0	6	0	1	0	7
2023-06-19	0	0	0	0	0	0	0	0	0	0	0	0
2023-06-20	0	0	0	0	0	0	0	0	0	0	0	0
2023-06-21	0	0	0	0	0	0	0	0	0	0	0	0
2023-06-22	0	0	0	0	0	0	0	0	0	0	0	0
2023-06-23	0	0	0	0	0	0	0	0	0	0	0	0
2023-06-24	0	0	0	0	0	0	0	0	0	0	0	0
2023-06-25	0	0	0	0	0	0	0	0	0	0	0	0
2023-06-26	0	0	0	0	0	0	0	0	0	0	0	0
2023-06-27	0	0	0	0	0	0	19	38	30	6	0	93
2023-06-28	0	0	0	0	0	0	0	13	4	5	0	22
2023-06-29	0	0	0	0	0	0	0	0	0	0	0	0
2023-06-30	0	0	0	0	0	0	0	1	1	0	0	2
2023-07-01	0	0	0	0	0	0	0	0	0	0	0	0
2023-07-02	0	0	0	0	0	0	0	0	0	0	0	0
2023-07-03	0	0	0	0	0	0	0	0	0	0	0	0

Table 2: Indian River Road 2023 Radar Results - Harbour Hills Wind Project

Project # 25-11682

Date	0-25	25-50	50-100	100-150	150-200	200-250	250-500	500-1000	1000-1500	1500-2000	2000-3000	Total
2023-07-04	0	0	0	0	0	0	0	0	0	0	0	0
2023-07-05	0	0	0	0	0	0	0	0	0	0	0	0
2023-07-06	0	0	0	0	0	0	0	0	0	0	0	0
2023-07-07	0	0	0	0	0	0	0	0	0	0	0	0
2023-07-08	0	0	0	0	0	0	0	0	0	0	0	0
2023-07-09	0	0	0	0	0	0	0	0	0	0	0	0
2023-07-10	0	0	0	0	0	0	0	0	0	0	0	0
2023-07-11	0	0	0	0	0	0	0	0	0	0	0	0
2023-07-12	0	0	9	25	29	38	384	1482	780	187	0	2934
2023-07-13	0	0	0	0	0	0	0	0	0	0	0	0
2023-07-14	0	0	0	0	0	0	0	0	0	0	0	0
2023-07-15	0	0	0	0	0	0	0	0	0	0	0	0
2023-07-16	0	0	0	0	0	0	0	0	0	0	0	0
2023-07-17	0	0	0	0	0	0	0	0	0	0	0	0
2023-07-18	0	0	0	1	1	0	9	50	14	4	0	79
2023-07-19	0	0	0	0	0	0	1	42	29	8	0	80
2023-07-20	0	0	0	0	0	0	0	0	0	0	0	0
2023-07-21	0	0	0	0	0	0	0	0	0	0	0	0
2023-07-22	0	0	0	3	3	3	69	275	129	22	0	504
2023-07-23	0	0	0	0	0	0	0	0	0	0	0	0
2023-07-24	0	0	0	0	0	0	0	0	0	0	0	0
2023-07-25	0	0	0	0	0	0	0	0	0	0	0	0
2023-07-26	0	0	0	0	0	0	0	0	0	0	0	0
2023-07-27	0	0	0	0	0	0	0	0	0	0	0	0
2023-07-28	0	0	1	0	1	0	6	24	5	1	0	38
2023-07-29	0	0	0	0	0	0	0	0	0	0	0	0
2023-07-30	0	0	0	0	0	0	0	0	0	0	0	0
2023-07-31	0	0	0	0	0	0	0	0	0	0	0	0
2023-08-01	0	0	0	0	0	0	0	0	0	0	0	0
2023-08-02	0	0	0	0	0	0	0	0	0	0	0	0
2023-08-03	0	0	0	0	0	0	0	0	0	0	0	0
2023-08-04	0	0	0	0	0	0	0	0	0	0	0	0
2023-08-05	0	0	0	5	2	1	20	90	48	4	0	170
2023-08-06	0	0	1	0	0	1	5	17	0	0	0	24
2023-08-07	0	0	0	0	0	0	0	0	0	0	0	0
2023-08-08	0	0	0	0	0	0	0	0	0	0	0	0
2023-08-09	0	0	0	0	0	0	0	0	0	0	0	0
2023-08-10	0	0	0	0	0	0	0	0	0	0	0	0
2023-08-11	0	0	0	0	0	0	0	0	0	0	0	0
2023-08-12	0	0	0	0	0	0	0	0	0	0	0	0
2023-08-13	0	0	0	0	0	0	0	0	0	0	0	0
2023-08-14	0	0	0	0	0	0	0	2	1	0	0	3

Table 2: Indian River Road 2023 Radar Results - Harbour Hills Wind Project

Project # 25-11682

Date	0-25	25-50	50-100	100-150	150-200	200-250	250-500	500-1000	1000-1500	1500-2000	2000-3000	Total
2023-08-15	0	0	0	1	0	1	22	38	18	2	0	82
2023-08-16	0	0	0	0	0	0	0	0	0	0	0	0
2023-08-17	0	0	0	0	0	0	0	0	0	0	0	0
2023-08-18	0	0	0	0	0	0	1	5	3	0	0	9
2023-08-19	0	0	0	1	1	1	8	38	15	2	0	66
2023-08-20	0	0	0	0	0	0	0	0	0	0	0	0
2023-08-21	0	0	0	0	0	0	0	0	0	0	0	0
2023-08-22	0	0	0	0	0	0	0	0	0	0	0	0
2023-08-23	0	0	0	0	0	0	0	0	0	0	0	0
2023-08-24	0	0	0	0	0	0	0	0	0	0	0	0
2023-08-25	0	0	0	0	0	0	0	0	0	0	0	0
2023-08-26	0	0	0	0	0	0	0	0	0	0	0	0
2023-08-27	0	0	0	0	0	0	0	0	0	0	0	0
2023-08-28	0	0	0	0	0	0	0	0	0	0	0	0
2023-08-29	0	0	0	0	0	0	0	0	0	0	0	0
2023-08-30	0	0	0	0	0	0	0	0	0	0	0	0
2023-08-31	0	0	0	2	4	1	68	423	201	47	0	746
2023-09-01	0	0	0	0	0	0	0	0	0	0	0	0
2023-09-02	0	0	0	0	0	0	0	0	0	0	0	0
2023-09-03	0	0	0	0	0	0	0	0	0	0	0	0
2023-09-04	0	0	0	0	0	0	0	0	0	0	0	0
2023-09-05	0	0	0	0	0	0	0	0	0	0	0	0
2023-09-06	0	0	0	0	0	0	0	0	0	0	0	0
2023-09-07	0	0	0	0	0	0	0	5	3	0	0	8
2023-09-08	0	0	0	0	0	0	0	0	0	0	0	0
2023-09-09	0	0	0	0	0	0	0	0	0	0	0	0
2023-09-10	0	0	0	0	0	0	0	0	0	0	0	0
2023-09-11	0	0	0	0	0	0	0	0	1	0	0	1
2023-09-12	0	0	0	1	1	0	16	124	56	20	0	218
2023-09-13	0	0	0	0	0	0	0	0	0	0	0	0
2023-09-14	0	0	0	0	0	0	0	1	2	1	0	4
2023-09-15	0	0	0	0	0	0	0	0	0	0	0	0
2023-09-16	0	0	0	0	0	0	0	0	0	0	0	0
2023-09-17	0	0	0	0	0	0	0	0	0	0	0	0
2023-09-18	0	0	0	0	0	0	0	0	0	0	0	0
2023-09-19	0	0	0	0	0	0	0	0	0	0	0	0
2023-09-20	0	0	0	0	0	0	0	0	0	0	0	0
2023-09-21	0	0	0	0	0	0	0	0	0	0	0	0
2023-09-22	0	0	0	0	0	0	0	0	0	0	0	0
2023-09-23	0	0	0	0	0	0	0	0	0	0	0	0
2023-09-24	0	0	0	0	0	0	0	0	0	0	0	0
2023-09-25	0	0	0	0	0	0	0	0	0	0	0	0

Table 2: Indian River Road 2023 Radar Results - Harbour Hills Wind Project

Project # 25-11682

Date	0-25	25-50	50-100	100-150	150-200	200-250	250-500	500-1000	1000-1500	1500-2000	2000-3000	Total
2023-09-26	0	0	0	0	0	0	0	0	0	0	0	0
2023-09-27	0	0	0	0	0	0	0	0	0	0	0	0
2023-09-28	0	0	0	0	0	0	0	0	0	0	0	0
2023-09-29	0	0	0	0	0	0	0	0	0	0	0	0
2023-09-30	0	0	0	0	0	0	0	0	0	0	0	0
2023-10-01	0	0	0	0	0	0	0	0	0	0	0	0
2023-10-02	0	0	0	0	0	0	0	0	0	0	0	0
2023-10-03	0	0	0	0	0	0	0	0	0	0	0	0
2023-10-04	0	0	0	0	0	0	0	0	0	0	0	0
2023-10-05	0	0	0	0	0	0	0	0	0	0	0	0
2023-10-06	0	0	0	0	0	0	0	0	0	0	0	0
2023-10-07	0	0	0	0	0	0	0	0	0	0	0	0
2023-10-08	0	0	0	0	0	0	0	0	0	0	0	0
2023-10-09	0	0	0	0	0	0	0	0	0	0	0	0
2023-10-10	0	0	0	0	0	0	0	0	0	0	0	0
2023-10-11	0	0	0	0	0	0	0	0	0	0	0	0
2023-10-12	0	0	0	0	0	0	0	0	0	0	0	0
2023-10-13	0	0	0	0	0	0	0	0	0	0	0	0
2023-10-14	0	0	0	0	0	0	0	0	0	0	0	0
2023-10-15	0	0	0	0	0	0	0	0	0	0	0	0
2023-10-16	0	0	0	0	0	0	0	0	0	0	0	0
2023-10-17	0	0	0	0	0	0	0	0	0	0	0	0
2023-10-18	0	0	0	0	0	0	0	0	0	0	0	0
2023-10-19	0	0	0	0	0	0	0	0	0	0	0	0
2023-10-20	0	0	0	0	0	0	0	0	0	0	0	0
2023-10-21	0	0	0	0	0	0	0	0	0	0	0	0
2023-10-22	0	0	0	0	0	0	0	0	0	0	0	0
2023-10-23	0	0	0	0	0	0	0	0	0	0	0	0
2023-10-24	0	0	0	0	0	0	0	0	0	0	0	0
2023-10-25	0	0	0	0	0	0	0	0	0	0	0	0
2023-10-26	0	0	0	0	0	0	0	0	0	0	0	0
2023-10-27	0	0	0	0	0	0	0	0	0	0	0	0
2023-10-28	0	0	0	0	0	0	0	0	0	0	0	0
2023-10-29	0	0	0	0	0	0	0	0	0	0	0	0
2023-10-30	0	0	0	0	0	0	0	0	0	0	0	0
2023-10-31	0	0	0	0	0	0	0	0	0	0	0	0
2023-11-01	0	0	0	0	0	0	0	0	0	0	0	0
2023-11-02	0	0	0	0	0	0	0	0	0	0	0	0
2023-11-03	0	0	0	0	0	0	0	0	0	0	0	0
2023-11-04	0	0	0	0	0	0	0	0	0	0	0	0
2023-11-05	0	0	0	0	0	0	0	0	0	0	0	0
2023-11-06	0	0	0	0	0	0	0	0	0	0	0	0

Table 2: Indian River Road 2023 Radar Results - Harbour Hills Wind Project

Project # 25-11682

Date	0-25	25-50	50-100	100-150	150-200	200-250	250-500	500-1000	1000-1500	1500-2000	2000-3000	Total
2023-11-07	0	0	0	0	0	0	0	0	0	0	0	0
2023-11-08	0	0	0	0	0	0	0	0	0	0	0	0
2023-11-09	0	0	0	0	0	0	0	0	0	0	0	0
2023-11-10	0	0	0	0	0	0	0	0	0	0	0	0
2023-11-11	0	0	0	0	0	0	0	0	0	0	0	0
2023-11-12	0	0	0	0	0	0	0	0	0	0	0	0
2023-11-13	0	0	0	0	0	0	0	0	0	0	0	0
2023-11-14	0	0	0	0	0	0	0	0	0	0	0	0
2023-11-15	0	0	0	0	0	0	0	0	0	0	0	0
2023-11-16	0	0	0	0	0	0	0	0	0	0	0	0
2023-11-17	0	0	0	0	0	0	0	0	0	0	0	0
2023-11-18	0	0	0	0	0	0	0	0	0	0	0	0
2023-11-19	0	0	0	0	0	0	2	42	37	8	0	89
2023-11-20	0	0	0	0	0	0	0	0	0	0	0	0
2023-11-21	0	0	0	0	0	0	0	0	0	0	0	0
2023-11-22	0	0	0	0	0	0	0	0	0	0	0	0
2023-11-23	0	0	0	0	0	0	0	0	0	0	0	0
2023-11-24	0	0	0	0	0	0	0	0	0	0	0	0
2023-11-25	0	0	0	0	0	0	0	0	0	0	0	0
2023-11-26	0	0	0	0	0	0	0	0	0	0	0	0
2023-11-27	0	0	0	0	0	0	0	0	0	0	0	0

Table 3: Species Detectable by Nighthawk

Project # 25-11682

Common Name	Scientific Name
American Redstart	<i>Setophaga ruticilla</i>
American Bittern	<i>Botaurus lentiginosus</i>
American Pipit	<i>Anthus rubescens</i>
American Robin	<i>Turdus migratorius</i>
American Tree Sparrow	<i>Spizelloides arborea</i>
Bicknell's Thrush	<i>Catharus bicknelli</i>
Black Oystercatcher	<i>Haematopus bachmani</i>
Black Skimmer	<i>Rynchops niger</i>
Black-and-white Warbler	<i>Mniotilta varia</i>
Black-bellied Plover	<i>Pluvialis squatarola</i>
Black-billed Cuckoo	<i>Coccyzus erythrophthalmus</i>
Black-crowned Night-Heron	<i>Nycticorax nycticorax</i>
Black-throated Blue Warbler	<i>Setophaga caerulescens</i>
Bobolink	<i>Dolichonyx oryzivorus</i>
Brewer's Sparrow	<i>Spizella breweri</i>
Canada Warbler	<i>Cardellina canadensis</i>
Cape May Warbler	<i>Setophaga tigrina</i>
Cerulean Warbler	<i>Setophaga cerulea</i>
Chestnut-sided Warbler	<i>Setophaga pensylvanica</i>
Chipping Sparrow	<i>Spizella passerina</i>
Clay-colored Sparrow	<i>Spizella pallida</i>
Common Tern	<i>Sterna hirundo</i>
Common Yellowthroat	<i>Geothlypis trichas</i>
Dark-eyed Junco	<i>Junco hyemalis</i>
Dickcissel	<i>Spiza americana</i>
Eastern Meadowlark	<i>Sturnella magna</i>
Forster's Tern	<i>Sterna forsteri</i>
Golden-crowned Kinglet	<i>Regulus satrapa</i>
Golden-winged Warbler	<i>Vermivora chrysoptera</i>
Grasshopper Sparrow	<i>Ammodramus savannarum</i>
Gray-cheeked Thrush	<i>Catharus minimus</i>
Great Egret	<i>Ardea alba</i>
Greater Yellowlegs	<i>Tringa melanoleuca</i>
Green Heron	<i>Butorides virescens</i>
Harris's Sparrow	<i>Zonotrichia querula</i>
Henslow's Sparrow	<i>Centronyx henslowii</i>
Hermit Thrush	<i>Catharus guttatus</i>
Hermit Warbler	<i>Setophaga occidentalis</i>
Hooded Warbler	<i>Setophaga citrina</i>
Indigo Bunting	<i>Passerina cyanea</i>
Kentucky Warbler	<i>Geothlypis formosa</i>
Killdeer	<i>Charadrius vociferus</i>

Table 3: Species Detectable by Nighthawk

Project # 25-11682

Common Name	Scientific Name
Kirtland's Warbler	<i>Setophaga kirtlandii</i>
Lapland Longspur	<i>Calcarius lapponicus</i>
Lark Sparrow	<i>Chondestes grammacus</i>
Least Bittern	<i>Ixobrychus exilis</i>
Least Sandpiper	<i>Calidris minutilla</i>
Lesser Yellowlegs	<i>Tringa flavipes</i>
Lincoln's Sparrow	<i>Melospiza lincolni</i>
MacGillivray's Warbler	<i>Geothlypis tolmiei</i>
Mourning Warbler	<i>Geothlypis philadelphia</i>
Nashville Warbler	<i>Leiothlypis ruficapilla</i>
Northern Parula	<i>Setophaga americana</i>
Northern Waterthrush	<i>Parus noveboracensis</i>
Orchard Oriole	<i>Icterus spurius</i>
Ovenbird	<i>Seiurus aurocapilla</i>
Painted Bunting	<i>Passerina ciris</i>
Palm Warbler	<i>Setophaga palmarum</i>
Red-breasted Nuthatch	<i>Sitta canadensis</i>
Rose-breasted Grosbeak	<i>Pheucticus ludovicianus</i>
Savannah Sparrow	<i>Passerculus sandwichensis</i>
Scarlet Tanager	<i>Piranga olivacea</i>
Seaside Sparrow	<i>Ammospiza maritima</i>
Semipalmated Plover	<i>Charadrius semipalmatus</i>
Short-billed Dowitcher	<i>Limnodromus griseus</i>
Solitary Sandpiper	<i>Tringa solitaria</i>
Spotted Sandpiper	<i>Actitis macularia</i>
Sprague's Pipit	<i>Anthus spragueii</i>
Summer Tanager	<i>Piranga rubra</i>
Swainson's Thrush	<i>Catharus ustulatus</i>
Upland Sandpiper	<i>Bartramia longicauda</i>
Veery	<i>Catharus fuscescens</i>
Vesper Sparrow	<i>Poocetes gramineus</i>
White-crowned Sparrow	<i>Zonotrichia leucophrys</i>
White-throated Sparrow	<i>Zonotrichia albicollis</i>
Wilson's Snipe	<i>Gallinago delicata</i>
Wilson's Warbler	<i>Cardellina pusilla</i>
Wood Thrush	<i>Hylocichla mustelina</i>
Worm-eating Warbler	<i>Helmitheros vermivorum</i>
Yellow-billed Cuckoo	<i>Coccyzus americanus</i>
Yellow-rumped Warbler	<i>Setophaga coronata</i>
Yellow-throated Warbler	<i>Setophaga dominica</i>

Table 4: 2023 FHBird1 Nighthawk Results - Harbour Hills Wind Project

Project # 25-11682

Begin Time (s)	End Time (s)	Low Freq (Hz)	High Freq (Hz)	Order	Order Probability	Family	Family Probability	Group	Group Probability	Species	Species Probability	Predicted Category	Probability	Date	Time	Annotation
1575.4	1577	0	11025	Passeriformes	0.9722063	Parulidae	0.95642495			amered	0.9032078	amered	0.903207779	2023-05-28	1:38:18 AM	Y
2098.4	2099.8	0	11025	Passeriformes	0.9713392	Turdidae	0.95793414			amerob	0.99999523	amerob	0.999995232	2023-05-29	5:48:00 AM	Y
70.8	72	0	11025	Passeriformes	0.9700116	Turdidae	0.91361696			amerob	0.9596747	amerob	0.959674716	2023-06-04	5:19:13 AM	Y
397.6	399	0	11025	Passeriformes	0.9720014	Parulidae	0.95609826			bawwar	0.99822825	bawwar	0.998228252	2023-05-26	5:16:40 AM	Y
3590.2	3591.8	0	11025	Passeriformes	0.97218883	Parulidae	0.95575804			bawwar	0.9999999	bawwar	0.999999881	2023-05-27	9:11:50 PM	Y
856	857.8	0	11025	Passeriformes	0.97209316	Parulidae	0.9557542			bawwar	0.99987006	bawwar	0.999870062	2023-05-27	10:26:18 PM	Y
1607	1608.6	0	11025	Passeriformes	0.9722306	Parulidae	0.9564534			bawwar	0.9999989	bawwar	0.999998927	2023-05-27	11:38:49 PM	Y
3041.8	3043.4	0	11025	Passeriformes	0.9722334	Parulidae	0.9564475			bawwar	0.9999999	bawwar	0.999999881	2023-05-28	1:02:44 AM	Y
779.4	781.2	0	11025	Passeriformes	0.9720186	Parulidae	0.9557824			bawwar	0.9999993	bawwar	0.999999285	2023-05-29	5:26:01 AM	Y
1536.8	1538.2	0	11025	Passeriformes	0.97162724	Parulidae	0.9561113			bawwar	0.99996746	bawwar	0.999967456	2023-05-29	5:38:39 AM	Y
1579.2	1580.6	0	11025	Passeriformes	0.971618	Parulidae	0.95619905			bawwar	0.9999982	bawwar	0.999998212	2023-05-29	5:39:21 AM	Y
234.4	236.8	0	11025	Passeriformes	0.9722034	Parulidae	0.9564117			bawwar	0.9999995	bawwar	0.999999523	2023-05-30	5:17:56 AM	Y
105.6	107.2	0	11025	Passeriformes	0.9722334	Parulidae	0.95648265			bawwar	0.9999999	bawwar	0.999999881	2023-05-31	5:16:48 AM	Y
1324.4	1325.8	0	11025	Passeriformes	0.97223455	Parulidae	0.9564874			bawwar	0.99948186	bawwar	0.999481857	2023-06-02	12:39:06 AM	Y
2711.6	2713	0	11025	Passeriformes	0.9722083	Parulidae	0.95639026			bawwar	0.99999964	bawwar	0.999999642	2023-06-04	4:03:14 AM	Y
591.4	593	0	11025	Passeriformes	0.9721671	Parulidae	0.9562731			bawwar	0.9999995	bawwar	0.999999523	2023-06-04	5:27:53 AM	Y
686.6	688.4	0	11025	Passeriformes	0.97154343	Parulidae	0.95428467			bawwar	0.99991715	bawwar	0.99991715	2023-06-04	5:29:29 AM	Y
514.8	516.4	0	11025	Passeriformes	0.9722054	Parulidae	0.9563185			bawwar	0.9999987	bawwar	0.999998689	2023-06-05	4:27:37 AM	Y
3353.6	3355.2	0	11025	Passeriformes	0.97222316	Parulidae	0.95645165			bawwar	0.99999654	bawwar	0.999996543	2023-06-05	5:14:56 AM	Y
322.8	324.6	0	11025	Cuculiformes	0.99329126	Cuculidae	0.99410385			bkb cuc	0.9999764	bkb cuc	0.999976397	2023-05-31	2:20:25 AM	Y
3122.4	3123.6	0	11025	Passeriformes	0.972151	Icteridae	0.9999995			boboli	0.99597293	boboli	0.995972931	2023-05-30	4:06:04 AM	Y
2172.714447	2173.8	0	11025	Passeriformes	0.9370009	Icteridae	0.9999999			boboli	0.9996425	boboli	0.999642491	2023-05-31	4:51:15 AM	Y
2307.6	2309.4	0	11025	Passeriformes	0.9719849	Parulidae	0.9545559	ZEEP	0.96040165	camwar	0.9999999	camwar	0.999999881	2023-05-27	4:49:30 AM	Y
1289	1290.8	0	11025	Passeriformes	0.969303	Parulidae	0.8706467	ZEEP	0.83264214	camwar	0.9993057	camwar	0.999305725	2023-05-29	4:34:31 AM	Y
1528.6	1530.2	0	11025	Passeriformes	0.9722366	Parulidae	0.95639634			canwar	0.99803215	canwar	0.998032153	2023-05-25	10:35:31 PM	Y
2922.4	2923.6	0	11025	Passeriformes	0.9565183	Parulidae	0.9413055			canwar	0.9518269	canwar	0.95182687	2023-05-26	4:58:44 AM	Y
2924.6	2926.4	0	11025	Passeriformes	0.9714584	Parulidae	0.95240545			canwar	0.9967801	canwar	0.996780097	2023-05-26	4:58:47 AM	Y
2927.4	2929	0	11025	Passeriformes	0.9719401	Parulidae	0.9556881			canwar	0.99623615	canwar	0.996236145	2023-05-26	4:58:49 AM	Y
1239.2	1240.8	0	11025	Passeriformes	0.97103006	Parulidae	0.9528211			canwar	0.98660475	canwar	0.98660475	2023-05-27	11:32:41 PM	Y
3550.8	3552.2	0	11025	Passeriformes	0.9720292	Parulidae	0.9561766			canwar	0.9847534	canwar	0.98475337	2023-05-28	9:12:11 PM	Y
1865.8	1867.6	0	11025	Passeriformes	0.9721487	Parulidae	0.9561282			canwar	0.9972019	canwar	0.99720192	2023-05-28	10:44:08 PM	Y
1838.2	1840	0	11025	Passeriformes	0.97220314	Parulidae	0.9555392			canwar	0.9978345	canwar	0.997834504	2023-05-30	10:45:40 PM	Y
70.2	71.8	0	11025	Passeriformes	0.97208863	Parulidae	0.9540955			canwar	0.9975496	canwar	0.997549593	2023-05-30	11:16:12 PM	Y
1577.4	1579.2	0	11025	Passeriformes	0.97222507	Parulidae	0.9563233			canwar	0.99786097	canwar	0.997860968	2023-05-31	10:42:19 PM	Y
609.6	611.4	0	11025	Passeriformes	0.97191226	Passerellidae	0.99523526	CUPS	0.9879688	chispa	0.9547875	chispa	0.954787493	2023-06-01	1:26:13 AM	Y
3501.8	3503.6	0	11025	Passeriformes	0.9720763	Parulidae	0.9558776	BZWA	0.98299843	comyel	0.9999999	comyel	0.999999881	2023-05-28	1:10:24 AM	Y
494	495.4	0	11025	Passeriformes	0.97185004	Parulidae	0.95454323	BZWA	0.98121923	comyel	0.9999993	comyel	0.999999285	2023-05-28	11:21:16 PM	Y
1912	1913.4	0	11025	Passeriformes	0.9719671	Parulidae	0.9543583	BZWA	0.9812475	comyel	0.999864	comyel	0.999863982	2023-05-29	3:44:54 AM	Y
197.6	199.4	0	11025	Passeriformes	0.97207165	Parulidae	0.955876	BZWA	0.98272747	comyel	0.9999999	comyel	0.999999881	2023-05-30	10:18:20 PM	Y
1325.6	1327.4	0	11025	Passeriformes	0.9720785	Parulidae	0.9555821	BZWA	0.97033095	comyel	0.9999523	comyel	0.999952316	2023-05-30	11:37:08 PM	Y
1010.2	1012	0	11025	Passeriformes	0.9722182	Parulidae	0.9560858	BZWA	0.98211974	comyel	0.9999999	comyel	0.999999881	2023-05-31	12:31:52 AM	Y
3371.2	3372.8	0	11025	Passeriformes	0.9715484	Parulidae	0.9521566	BZWA	0.86803985	comyel	0.9977489	comyel	0.997748911	2023-05-31	3:11:13 AM	Y
2050.2	2051.8	0	11025	Passeriformes	0.9711521	Parulidae	0.9530943	BZWA	0.96169513	comyel	0.9999906	comyel	0.999990582	2023-05-31	10:50:12 PM	Y
2344.6	2346.4	0	11025	Passeriformes	0.972194	Parulidae	0.9559575	BZWA	0.97586095	comyel	0.9999726	comyel	0.999972582	2023-05-31	10:55:07 PM	Y
2347.4	2349.2	0	11025	Passeriformes	0.970992	Parulidae	0.9535786	BZWA	0.98116416	comyel	0.9999993	comyel	0.999999285	2023-05-31	10:55:09 PM	Y
2426.2	2428	0	11025	Passeriformes	0.9721748	Parulidae	0.95624524	BZWA	0.98265666	comyel	0.9999995	comyel	0.999999523	2023-05-31	10:56:28 PM	Y
1782.2	1783.6	0	11025	Passeriformes	0.94269973	Parulidae	0.9291866	BZWA	0.89462376	comyel	0.9380212	comyel	0.938021183	2023-06-01	4:45:44 AM	Y
3334.6	3336.4	0	11025	Passeriformes	0.97191274	Parulidae	0.9548971	BZWA	0.98200756	comyel	0.9999999	comyel	0.999999881	2023-06-01	10:12:37 PM	Y
3114	3115.8	0	11025	Passeriformes	0.97196645	Parulidae	0.9555858	BZWA	0.9811468	comyel	0.99999976	comyel	0.999999762	2023-06-01	11:08:56 PM	Y
1799	1801	0	11025	Passeriformes	0.9713425	Passerellidae	0.9954809			daejun	0.99696034	daejun	0.996960342	2023-05-26	4:40:01 AM	Y
2202.4	2204	0	11025	Passeriformes	0.9591094	Passerellidae	0.9922328			daejun	0.99578804	daejun	0.995788038	2023-05-26	4:46:44 AM	Y
1779.2	1780.6	0	11025	Passeriformes	0.9679279	Passerellidae	0.99425936			daejun	0.9961661	daejun	0.99616611	2023-05-28	5:41:41 AM	Y
3359.4	3360.6	0	11025	Passeriformes	0.9644582	Passerellidae	0.9946806			daejun	0.91291106	daejun	0.912911057	2023-05-29	4:09:01 AM	Y

Table 4: 2023 FHBird1 Nighthawk Results - Harbour Hills Wind Project

Project # 25-11682

Begin Time (s)	End Time (s)	Low Freq (Hz)	High Freq (Hz)	Order	Order Probability	Family	Family Probability	Group	Group Probability	Species	Species Probability	Predicted Category	Probability	Date	Time	Annotation
1091.8	1093.2	0	11025	Passeriformes	0.9721934	Passerellidae	0.99555284			daejun	0.9969901	daejun	0.996990085	2023-05-29	5:31:14 AM	Y
808.6	810	0	11025	Passeriformes	0.9717068	Passerellidae	0.9953643			daejun	0.9968791	daejun	0.996879101	2023-05-31	5:28:31 AM	Y
1709.8	1711	0	11025	Passeriformes	0.9499063	Turdidae	0.8977718	THSH	0.8610175	herthr	0.99999595	herthr	0.999995947	2023-05-27	3:39:32 AM	Y
1413.4	1415	0	11025	Passeriformes	0.9699818	Turdidae	0.95731884	THSH	0.94357455	herthr	0.9999989	herthr	0.999998927	2023-05-28	3:35:35 AM	Y
798.8	800.2	0	11025	Passeriformes	0.970111	Turdidae	0.9559559	THSH	0.94159675	herthr	0.99999845	herthr	0.99999845	2023-05-29	3:26:21 AM	Y
1517.2	1518.8	0	11025	Passeriformes	0.97177637	Turdidae	0.95119536	THSH	0.9324516	herthr	0.9999987	herthr	0.999998689	2023-05-29	5:38:19 AM	Y
1532.2	1533.6	0	11025	Passeriformes	0.96884537	Turdidae	0.9544743	THSH	0.9402517	herthr	0.99999857	herthr	0.999998569	2023-05-29	5:38:34 AM	Y
409	410.4	0	11025	Passeriformes	0.96473753	Turdidae	0.9505143	THSH	0.9348156	herthr	0.99999785	herthr	0.999997854	2023-05-30	4:20:51 AM	Y
3398.4	3399.8	0	11025	Passeriformes	0.9695709	Turdidae	0.9564513	THSH	0.943527	herthr	0.9999989	herthr	0.999998927	2023-05-30	5:10:40 AM	Y
984.2	985.8	0	11025	Passeriformes	0.9715347	Turdidae	0.95803463	THSH	0.9444444	herthr	0.9999989	herthr	0.999998927	2023-05-30	5:30:26 AM	Y
1925	1926.4	0	11025	Passeriformes	0.96988577	Turdidae	0.9535467	THSH	0.9375111	herthr	0.9999981	herthr	0.999998093	2023-05-30	5:46:07 AM	Y
87	88.4	0	11025	Passeriformes	0.96918136	Turdidae	0.9557259	THSH	0.9408808	herthr	0.99999845	herthr	0.99999845	2023-05-31	4:16:29 AM	Y
1136.8	1138	0	11025	Passeriformes	0.97214305	Turdidae	0.9582562	THSH	0.944966	herthr	0.9999989	herthr	0.999998927	2023-05-31	5:33:59 AM	Y
2375	2376.4	0	11025	Passeriformes	0.9719117	Turdidae	0.95904154	THSH	0.9461505	herthr	0.9999982	herthr	0.999998212	2023-06-01	4:55:37 AM	Y
2082.8	2084.6	0	11025	Passeriformes	0.9675763	Turdidae	0.95236295	THSH	0.9377056	herthr	0.9999987	herthr	0.999998689	2023-06-03	4:51:45 AM	Y
2102.2	2103.6	0	11025	Passeriformes	0.96021324	Turdidae	0.9355112	THSH	0.9111473	herthr	0.9999894	herthr	0.99998939	2023-06-03	4:52:04 AM	Y
2592	2593.8	0	11025	Passeriformes	0.96780485	Turdidae	0.94705844	THSH	0.92991674	herthr	0.99999857	herthr	0.999998569	2023-06-03	5:00:14 AM	Y
2033.2	2034.6	0	11025	Passeriformes	0.9711553	Turdidae	0.9572614	THSH	0.94325507	herthr	0.9999989	herthr	0.999998927	2023-06-04	5:51:55 AM	Y
604.2	605.8	0	11025	Passeriformes	0.97222114	Passerellidae	0.9955422	SWLI	0.9970694	linspa	0.93940187	linspa	0.939401865	2023-05-28	12:22:06 AM	Y
1664.4	1665.6	0	11025	Passeriformes	0.97223616	Passerellidae	0.9955853	SWLI	0.99709404	linspa	0.99700695	linspa	0.997006953	2023-06-04	4:45:46 AM	Y
1681	1682.4	0	11025	Passeriformes	0.9722186	Passerellidae	0.9955571	SWLI	0.99708754	linspa	0.99294454	linspa	0.992944539	2023-06-04	4:46:03 AM	Y
143.8	145.4	0	11025	Passeriformes	0.97192323	Parulidae	0.9490012	DEWA	0.9999895	norpar	0.9999366	norpar	0.999936581	2023-05-28	1:14:27 AM	Y
1343.2	1345	0	11025	Passeriformes	0.97156084	Parulidae	0.9484115	DEWA	0.99998474	norpar	0.99984586	norpar	0.999845862	2023-05-30	10:37:25 PM	Y
2725	2726.2	0	11025	Passeriformes	0.9656803	Parulidae	0.91401166	DEWA	0.99985087	norpar	0.9947173	norpar	0.9947173	2023-05-31	10:01:27 PM	Y
444.2	446	0	11025	Passeriformes	0.97159463	Parulidae	0.9427541	DEWA	0.99996936	norpar	0.9998116	norpar	0.99981159	2023-06-01	10:24:26 PM	Y
462.8	464.4	0	11025	Passeriformes	0.9720652	Parulidae	0.9405146	DEWA	0.9999894	norpar	0.9999411	norpar	0.999941111	2023-06-01	10:24:45 PM	Y
745	746.4	0	11025	Passeriformes	0.97223324	Parulidae	0.9557244	ZEEP	0.9587963	norwat	0.99241537	norwat	0.992415369	2023-05-28	1:24:28 AM	Y
27.4	28.6	0	11025	Passeriformes	0.97203225	Parulidae	0.9546727	ZEEP	0.9606411	norwat	0.99449855	norwat	0.994498551	2023-05-29	1:13:30 AM	Y
1408.8	1410.2	0	11025	Passeriformes	0.9722259	Parulidae	0.95542026	ZEEP	0.9574869	norwat	0.99931586	norwat	0.999315858	2023-05-30	10:38:31 PM	Y
2671	2672.6	0	11025	Passeriformes	0.9712867	Parulidae	0.9174719	ZEEP	0.9261698	norwat	0.9828287	norwat	0.982828677	2023-05-31	12:59:33 AM	Y
965.2	966.6	0	11025	Passeriformes	0.9722377	Parulidae	0.95646113	ZEEP	0.96294206	norwat	0.9915685	norwat	0.991568506	2023-06-01	12:32:07 AM	Y
1751.6	1753.2	0	11025	Passeriformes	0.9719997	Parulidae	0.955156	ZEEP	0.9600378	norwat	0.9999784	norwat	0.999978423	2023-06-01	4:45:14 AM	Y
3423	3424.6	0	11025	Passeriformes	0.97199494	Parulidae	0.9516692	SBUF	0.93187135	ovenbi1	0.9371616	ovenbi1	0.937161624	2023-05-28	12:09:05 AM	Y
1515.6	1517.4	0	11025	Passeriformes	0.97222036	Parulidae	0.9558298	SBUF	0.93978435	ovenbi1	0.9813349	ovenbi1	0.981334925	2023-05-31	1:40:19 AM	Y
268.2	269.6	0	11025	Passeriformes	0.9655334	Sittidae	0.98310965			rebnut	0.99721634	rebnut	0.997216344	2023-05-26	4:14:30 AM	Y
1991	1992.6	0	11025	Passeriformes	0.96714216	Sittidae	0.98368025			rebnut	0.9974075	rebnut	0.997407496	2023-06-04	3:51:13 AM	Y
2627.6	2629.6	0	11025	Passeriformes	0.9721058	Passerellidae	0.99557847	DESP	0.9919452	savspa	0.9981067	savspa	0.998106718	2023-05-26	4:53:50 AM	Y
1217.4	1219.2	0	11025	Passeriformes	0.97163504	Passerellidae	0.99543035	DESP	0.9917789	savspa	0.9983328	savspa	0.998332798	2023-05-31	5:35:19 AM	Y
3275	3276.4	0	11025	Passeriformes	0.967374	Turdidae	0.9510599	THSH	0.92739624	swathr	0.853172	swathr	0.853172004	2023-05-31	12:09:37 AM	Y
1196.6	1198.2	0	11025	Passeriformes	0.9719773	Passerellidae	0.9953779	SFHS	0.98985785	whtspa	0.9984786	whtspa	0.998478591	2023-05-26	4:29:59 AM	Y
910.8	912.6	0	11025	Passeriformes	0.97218126	Passerellidae	0.9955739	SFHS	0.9901641	whtspa	0.9984485	whtspa	0.998448491	2023-05-28	5:27:13 AM	Y
1185.6	1187.4	0	11025	Passeriformes	0.97194755	Passerellidae	0.99546117	SFHS	0.98985463	whtspa	0.9982553	whtspa	0.998255312	2023-05-28	5:31:48 AM	Y
2528.2	2532.4	0	11025	Passeriformes	0.97202075	Passerellidae	0.99550724	SFHS	0.99009573	whtspa	0.9984744	whtspa	0.998474419	2023-05-28	5:54:10 AM	Y
3419.2	3421	0	11025	Passeriformes	0.9721173	Passerellidae	0.9953046	SFHS	0.9896339	whtspa	0.9971848	whtspa	0.997184813	2023-05-29	5:10:01 AM	Y
292.8	294.6	0	11025	Passeriformes	0.97203875	Passerellidae	0.99545896	SFHS	0.9900129	whtspa	0.998201	whtspa	0.998201013	2023-05-31	5:19:55 AM	Y
1572.2	1574	0	11025	Passeriformes	0.9662125	Passerellidae	0.9946097	SFHS	0.9891454	whtspa	0.997008	whtspa	0.997008026	2023-05-31	5:41:14 AM	Y
3196.4	3197.6	0	11025	Passeriformes	0.9720001	Passerellidae	0.9955396	SFHS	0.989823	whtspa	0.99670404	whtspa	0.996704042	2023-06-04	4:11:18 AM	Y
83.6	86.2	0	11025	Passeriformes	0.97146904	Passerellidae	0.99506795	SFHS	0.9897983	whtspa	0.99790925	whtspa	0.997909248	2023-06-05	4:20:26 AM	Y
3201.2	3203	0	11025	Passeriformes	0.9715756	Passerellidae	0.9954223	SFHS	0.98948026	whtspa	0.99743026	whtspa	0.997430265	2023-06-05	5:12:23 AM	Y
3257.4	3258.6	0	11025	Passeriformes	0.97132194	Parulidae	0.9557599			canwar	0.83598644	canwar	0.835986435	2023-06-08	3:15:19 AM	Y
3226.2	3227.6	6672.34	11025	Passeriformes	0.9698201	Passerellidae	0.99463826	DESP	0.9880284	savspa	0.99677366	savspa	0.99677366	2023-06-08	3:14:48 AM	Y
229.2	230.6	0	11025	Passeriformes	0.9720713	Parulidae	0.95628023			bawwar	0.9999988	bawwar	0.999998808	2023-06-08	4:24:51 AM	Y
663.2	665.4	0	11025	Passeriformes	0.97206014	Parulidae	0.95354855			bawwar	0.99999917	bawwar	0.999999166	2023-06-08	4:32:05 AM	Y

Table 4: 2023 FHBird1 Nighthawk Results - Harbour Hills Wind Project

Project # 25-11682

Begin Time (s)	End Time (s)	Low Freq (Hz)	High Freq (Hz)	Order	Order Probability	Family	Family Probability	Group	Group Probability	Species	Species Probability	Predicted Category	Probability	Date	Time	Annotation
953.6	955.4	0	11025	Passeriformes	0.97221607	Parulidae	0.9564097			bawwar	0.9999988	bawwar	0.999998808	2023-06-08	4:36:56 AM	Y
2263.8	2265.6	0	11025	Passeriformes	0.9720613	Parulidae	0.95621693			bawwar	0.99999607	bawwar	0.999996066	2023-06-08	4:58:46 AM	Y
2229.6	2231.4	0	11025	Passeriformes	0.97212327	Parulidae	0.95518637	ZEEP	0.96110326	norwat	0.9999739	norwat	0.999973893	2023-06-10	12:59:12 AM	Y
2670	2671.8	0	11025	Passeriformes	0.97185093	Parulidae	0.9542446	MWAR	0.9987533	mouwar	0.9960645	mouwar	0.996064484	2023-06-10	11:07:32 PM	Y
1939	1940.8	0	11025	Passeriformes	0.9720944	Parulidae	0.95501435			canwar	0.9961765	canwar	0.996176481	2023-06-11	2:55:21 AM	Y
1332	1333.8	0	11025	Passeriformes	0.97217166	Parulidae	0.9559838			canwar	0.99669975	canwar	0.99669975	2023-06-11	9:46:15 PM	Y
631.4	633.2	0	11025	Passeriformes	0.97221035	Parulidae	0.9521647	ZEEP	0.96178883	norwat	0.9999994	norwat	0.999999404	2023-06-11	11:34:33 PM	Y
739.6	741.4	0	11025	Passeriformes	0.97195464	Parulidae	0.9553371	BZWA	0.98312736	comyel	0.99999976	comyel	0.999999762	2023-06-12	2:36:22 AM	Y
2015.4	2017	0	11025	Passeriformes	0.9721921	Parulidae	0.9554998	BZWA	0.89591527	comyel	0.9999838	comyel	0.999983788	2023-06-12	2:57:37 AM	Y
2209.6	2211.2	0	11025	Passeriformes	0.9568708	Parulidae	0.8520182	DEWA	0.99970764	norpar	0.9914452	norpar	0.991445184	2023-06-12	3:00:52 AM	Y
103.6	105	0	11025	Passeriformes	0.96724004	Turdidae	0.94598573	THSH	0.926773	herthr	0.9999987	herthr	0.999998689	2023-06-13	5:25:46 AM	Y
432.6	434.2	0	11025	Charadriiformes	0.98140186	Scolopacidae	0.9956696			greyel	0.9997925	greyel	0.999792516	2023-06-13	9:32:16 PM	Y
434.4	437.8	0	11025	Charadriiformes	0.9813307	Scolopacidae	0.99564916			greyel	0.9997671	greyel	0.999767125	2023-06-13	9:32:17 PM	Y
442	443.6	0	11025	Charadriiformes	0.9807662	Scolopacidae	0.9954614			greyel	0.9986946	greyel	0.998694599	2023-06-13	9:32:25 PM	Y
447.8	449.4	0	11025	Charadriiformes	0.98044956	Scolopacidae	0.99539584			greyel	0.99917847	greyel	0.999178469	2023-06-13	9:32:31 PM	Y
498.8	500	0	11025	Charadriiformes	0.97970474	Scolopacidae	0.995193			greyel	0.9993394	greyel	0.999339402	2023-06-13	9:33:22 PM	Y
2427.2	2428.6	0	11025	Passeriformes	0.9610487	Turdidae	0.94434094	THSH	0.9284081	swathr	0.8419478	swathr	0.841947794	2023-06-21	5:07:29 AM	Y
961.6	963.4	0	11025	Cuculiformes	0.99303705	Cuculidae	0.9937641			bkb cuc	0.9999436	bkb cuc	0.999943614	2023-06-22	1:44:05 AM	Y
981.6	983.4	0	11025	Cuculiformes	0.9923173	Cuculidae	0.99295735			bkb cuc	0.9994221	bkb cuc	0.999422073	2023-06-22	1:44:25 AM	Y
3360	3361.6	0	11025	Passeriformes	0.9722322	Parulidae	0.956486	DBUP	0.9558665	naswar	0.97394073	naswar	0.97394073	2023-06-22	5:24:02 AM	Y
2885	2887.4	0	11025	Passeriformes	0.9719729	Passerellidae	0.99548954	SFHS	0.9900754	whtspa	0.9978375	whtspa	0.997837484	2023-06-22	5:16:07 AM	Y
3064.8	3066	0	11025	Passeriformes	0.97126544	Turdidae	0.95600367	THSH	0.94205683	herthr	0.9999987	herthr	0.999998689	2023-06-24	9:19:05 PM	Y
3089	3090.4	0	11025	Passeriformes	0.9690832	Turdidae	0.9545716	THSH	0.93969166	herthr	0.9999988	herthr	0.999998808	2023-06-24	9:19:29 PM	Y
232.8	234.6	0	11025	Passeriformes	0.9722135	Passerellidae	0.9955716	SFHS	0.9901003	whtspa	0.9976259	whtspa	0.997625887	2023-06-25	8:31:53 PM	Y
3435	3436.6	0	11025	Passeriformes	0.97164303	Turdidae	0.9587605	THSH	0.94543016	herthr	0.9999989	herthr	0.999998927	2023-06-30	9:25:15 PM	Y
1132.8	1134.6	0	11025	Passeriformes	0.9713641	Passerellidae	0.9950641	SFHS	0.98949105	whtspa	0.9982083	whtspa	0.998208284	2023-06-30	8:46:53 PM	Y
1606.8	1608	0	11025	Passeriformes	0.9602358	Passerellidae	0.98627883			daejun	0.9819318	daejun	0.981931806	2023-07-02	8:54:47 PM	Y
1106.2	1107.6	0	11025	Passeriformes	0.9667144	Turdidae	0.9483917	THSH	0.92752403	herthr	0.9999981	herthr	0.999998093	2023-07-03	4:46:28 AM	Y
948.2	950.2	0	11025	Passeriformes	0.9721376	Turdidae	0.9584888	THSH	0.94518614	woothr	0.9999999	woothr	0.999999881	2023-07-05	12:42:50 AM	Y
158.8	160.2	0	11025	Passeriformes	0.9571556	Parulidae	0.94506097			bawwar	0.96218073	bawwar	0.962180734	2023-07-07	5:28:41 AM	Y
1195.4	1197.2	0	11025	Passeriformes	0.971008	Parulidae	0.9508665	ZEEP	0.9527525	camwar	0.99999666	camwar	0.999996662	2023-07-07	5:45:57 AM	Y
1211.4	1214.2	0	11025	Passeriformes	0.9712921	Parulidae	0.9547676	ZEEP	0.96021676	camwar	0.9999999	camwar	0.999999881	2023-07-07	5:46:13 AM	Y
1215.6	1220.6	0	11025	Passeriformes	0.9721114	Parulidae	0.95618564	ZEEP	0.9624364	camwar	0.9999999	camwar	0.999999881	2023-07-07	5:46:18 AM	Y
46.8	48.4	0	11025	Passeriformes	0.965153	Turdidae	0.9499166	THSH	0.93316203	herthr	0.99999607	herthr	0.999996066	2023-07-07	8:26:47 PM	Y
3407.6	3409	0	11025	Passeriformes	0.96914476	Turdidae	0.95437217	THSH	0.93836355	herthr	0.9999988	herthr	0.999998808	2023-07-12	9:19:48 PM	Y
2405.2	2407	0	11025	Charadriiformes	0.9809964	Scolopacidae	0.9954982			leasan	0.9999999	leasan	0.999999881	2023-07-13	2:03:08 AM	Y
1812.8	1814.2	0	11025	Passeriformes	0.97205734	Turdidae	0.95790887			amerob	0.9999993	amerob	0.999999285	2023-07-14	5:53:15 AM	Y
608.6	610	0	11025	Charadriiformes	0.98146397	Scolopacidae	0.99564517			greyel	0.99693346	greyel	0.99693346	2023-07-14	9:32:11 PM	Y
378.4	379.8	0	11025	Passeriformes	0.97156185	Turdidae	0.9587852	THSH	0.9455835	herthr	0.99999845	herthr	0.99999845	2023-07-14	9:28:20 PM	Y
1576.4	1577.6	0	11025	Passeriformes	0.9715901	Turdidae	0.9585148	THSH	0.9452364	herthr	0.99999845	herthr	0.99999845	2023-07-16	8:47:16 PM	Y
2995.6	2997	0	11025	Passeriformes	0.96454084	Turdidae	0.9527983	THSH	0.93816036	herthr	0.99999845	herthr	0.99999845	2023-07-20	9:06:56 PM	Y
215.2	216.8	0	11025	Passeriformes	0.9717566	Turdidae	0.9586973	THSH	0.94558096	herthr	0.9999989	herthr	0.999998927	2023-07-20	9:20:37 PM	Y
3223.2	3224.4	0	11025	Charadriiformes	0.9370057	Scolopacidae	0.98180723			leasan	0.9993606	leasan	0.999360621	2023-07-20	9:10:43 PM	Y
2285.6	2287	0	11025	Charadriiformes	0.9812019	Scolopacidae	0.99558395			solsan	0.9356655	solsan	0.935665488	2023-07-20	9:55:08 PM	Y
320.8	322.4	0	11025	Passeriformes	0.95979255	Passerellidae	0.98757833	SFHS	0.96885073	whtspa	0.97851413	whtspa	0.978514135	2023-07-25	8:18:21 PM	Y
1478.8	1480.8	0	11025	Charadriiformes	0.98131585	Scolopacidae	0.99565685			solsan	0.97044086	solsan	0.970440865	2023-07-27	11:02:57 PM	Y
1099	1100.8	0	11025	Passeriformes	0.9722239	Parulidae	0.95630294			bawwar	0.99999905	bawwar	0.999999046	2023-07-28	11:30:47 PM	Y
1542.4	1543.8	0	11025	Passeriformes	0.97222507	Parulidae	0.9558019	ZEEP	0.9620687	norwat	0.9999893	norwat	0.999989271	2023-07-28	11:38:10 PM	Y
1553.8	1555.2	0	11025	Passeriformes	0.9717837	Parulidae	0.9513629	ZEEP	0.95492727	norwat	0.9999974	norwat	0.999997377	2023-07-28	11:38:22 PM	Y
1576	1577.4	0	11025	Passeriformes	0.97221744	Parulidae	0.95585036	ZEEP	0.9595734	norwat	0.9999515	norwat	0.999951482	2023-07-28	11:38:44 PM	Y
1253.2	1254.8	0	11025	Passeriformes	0.96442163	Passerellidae	0.9921495	SFHS	0.9817821	whtspa	0.9965204	whtspa	0.9965204	2023-08-16	8:03:53 PM	Y
2584	2585.8	0	11025	Passeriformes	0.9716494	Passerellidae	0.9953229	SFHS	0.9894744	whtspa	0.9983822	whtspa	0.998382211	2023-08-16	8:26:04 PM	Y
759	760.8	0	11025	Passeriformes	0.97205895	Parulidae	0.9561092			amered	0.9031299	amered	0.903129876	2023-08-19	9:50:07 PM	Y

Table 4: 2023 FHBird1 Nighthawk Results - Harbour Hills Wind Project

Project # 25-11682

Begin Time (s)	End Time (s)	Low Freq (Hz)	High Freq (Hz)	Order	Order Probability	Family	Family Probability	Group	Group Probability	Species	Species Probability	Predicted Category	Probability	Date	Time	Annotation
144.8	146.6	0	11025	Passeriformes	0.97213686	Parulidae	0.9564321			amered	0.9032314	amered	0.903231382	2023-08-22	10:20:22 PM	Y
212.4	214.2	0	11025	Passeriformes	0.97222185	Parulidae	0.95633805			bawwar	0.9999554	bawwar	0.999955416	2023-08-22	10:21:29 PM	Y
227.4	229.2	0	11025	Passeriformes	0.972233	Parulidae	0.9564581			bawwar	0.9999995	bawwar	0.999999523	2023-08-22	10:21:44 PM	Y
124.6	126.2	0	11025	Passeriformes	0.9710173	Passerellidae	0.9951969	SFHS	0.98841596	whtspa	0.99743336	whtspa	0.997433364	2023-08-31	7:19:05 PM	Y
825.4	826.6	0	11025	Passeriformes	0.9503013	Parulidae	0.9145647	BZWA	0.9340151	comyel	0.9866974	comyel	0.986697376	2023-09-01	7:38:55 PM	Y
824.4	826.2	0	11025	Passeriformes	0.97021914	Passerellidae	0.99531025	SFHS	0.9896062	whtspa	0.99682045	whtspa	0.99682045	2023-09-01	7:38:54 PM	Y
3.8	7	0	11025	Passeriformes	0.97137487	Passerellidae	0.99525994	SFHS	0.9889836	whtspa	0.99757844	whtspa	0.997578442	2023-09-03	7:58:33 PM	Y
208.4	210	0	11025	Passeriformes	0.97183067	Passerellidae	0.99527353	SFHS	0.9881754	whtspa	0.98761576	whtspa	0.987615764	2023-09-03	8:01:57 PM	Y
92.4	95.4	0	11025	Passeriformes	0.97221935	Passerellidae	0.99551195	SFHS	0.9900794	whtspa	0.9984419	whtspa	0.998441875	2023-09-09	7:27:52 PM	Y
520	521.8	0	11025	Passeriformes	0.9722334	Parulidae	0.9564895			bawwar	0.9999999	bawwar	0.999999881	2023-09-12	8:04:30 PM	Y
109.6	111.4	0	11025	Passeriformes	0.9722373	Parulidae	0.9564887			bawwar	0.9999999	bawwar	0.999999881	2023-09-20	9:00:01 PM	Y
90.6	92.4	0	11025	Passeriformes	0.97223806	Parulidae	0.9562738			bawwar	0.9999993	bawwar	0.999999285	2023-09-22	9:12:02 PM	Y
90.2	92	0	11025	Passeriformes	0.9721745	Passerellidae	0.99538404	DESP	0.9916055	savspa	0.998281	savspa	0.998281002	2023-09-22	9:12:01 PM	Y
71.2	72.8	0	11025	Passeriformes	0.97121453	Parulidae	0.9545456	BZWA	0.98103803	comyel	0.99999225	comyel	0.999992251	2023-09-26	9:36:22 PM	Y
46	48	0	11025	Passeriformes	0.9721948	Passerellidae	0.99554104	DESP	0.9918167	savspa	0.9973757	savspa	0.997375727	2023-09-26	9:35:57 PM	Y
19.6	21.2	0	11025	Passeriformes	0.9648523	Turdidae	0.9517084	THSH	0.9382361	swathr	0.87366015	swathr	0.873660147	2023-10-07	6:16:30 PM	Y
1729	1730.8	0	11025	Passeriformes	0.97217417	Parulidae	0.95600355	BZWA	0.9820681	comyel	0.99999964	comyel	0.999999642	2023-10-17	8:17:51 PM	Y
305.2	307	0	11025	Passeriformes	0.97216946	Passerellidae	0.99556726			daejun	0.9970048	daejun	0.997004807	2023-10-17	5:54:05 PM	Y
1795.8	1798.6	0	11025	Passeriformes	0.9712753	Passerellidae	0.99532974			daejun	0.9968232	daejun	0.996823192	2023-10-17	6:18:56 PM	Y
3350.8	3352.6	0	11025	Passeriformes	0.9721666	Parulidae	0.9542849	SBUF	0.93439907	ovenbi1	0.97794	ovenbi1	0.977940023	2023-10-17	9:44:53 PM	Y
2232.6	2233.8	0	11025	Passeriformes	0.9676463	Parulidae	0.9247222	SBUF	0.9029264	palwar	0.99999774	palwar	0.999997735	2023-10-17	8:26:15 PM	Y
3041.6	3043.4	0	11025	Passeriformes	0.97216946	Passerellidae	0.9954535	SFHS	0.98999375	whtspa	0.99848866	whtspa	0.998488665	2023-10-17	8:39:44 PM	Y
3047.4	3049	0	11025	Passeriformes	0.9721478	Passerellidae	0.9954873	SFHS	0.98988897	whtspa	0.99821174	whtspa	0.998211741	2023-10-17	9:39:49 PM	Y
1270.2	1272	0	11025	Passeriformes	0.97216606	Parulidae	0.9558872	BZWA	0.9748583	comyel	0.9999994	comyel	0.999999404	2023-10-18	9:08:12 PM	Y
3341.6	3343.4	0	11025	Passeriformes	0.9710136	Parulidae	0.951702	BZWA	0.9791383	comyel	0.99999964	comyel	0.999999642	2023-10-18	10:42:44 PM	Y
3358.6	3360.2	0	11025	Passeriformes	0.9616701	Turdidae	0.93582624	THSH	0.904376	herthr	0.9999924	herthr	0.999992371	2023-10-18	6:45:01 AM	Y
2406	2407.8	0	11025	Passeriformes	0.9719366	Parulidae	0.93837965	SBUF	0.93018746	palwar	0.9999999	palwar	0.999999881	2023-10-18	2:29:08 AM	Y
3517.6	3519	0	11025	Passeriformes	0.9675962	Parulidae	0.92623514	SBUF	0.87802327	palwar	0.9999995	palwar	0.999999523	2023-10-18	11:45:41 PM	Y
3532	3533.6	0	11025	Passeriformes	0.97144157	Parulidae	0.9519216	SBUF	0.91977125	palwar	0.99999964	palwar	0.999999642	2023-10-18	11:45:55 PM	Y
930	931.8	0	11025	Passeriformes	0.97213835	Passerellidae	0.9955375	DESP	0.9918515	savspa	0.9978492	savspa	0.997849226	2023-10-18	2:04:32 AM	Y
3256.4	3258.2	0	11025	Passeriformes	0.9720516	Passerellidae	0.9954804	DESP	0.99171937	savspa	0.998406	savspa	0.998405993	2023-10-18	8:41:18 PM	Y
737.6	739.4	0	11025	Passeriformes	0.9719554	Passerellidae	0.995106	DESP	0.9909831	savspa	0.99816114	savspa	0.998161137	2023-10-18	8:59:20 PM	Y
878.6	880.4	0	11025	Passeriformes	0.97219694	Passerellidae	0.99543804	SFHS	0.98995626	whtspa	0.99844486	whtspa	0.998444855	2023-10-18	2:03:41 AM	Y
3125.6	3127.2	0	11025	Passeriformes	0.9719439	Turdidae	0.95917445			amerob	0.99999857	amerob	0.999998569	2023-10-19	7:39:08 AM	Y
218.6	220.2	0	11025	Passeriformes	0.9721395	Turdidae	0.959534			amerob	0.9999999	amerob	0.999999881	2023-10-19	7:50:41 AM	Y
2055.4	2057.2	0	11025	Passeriformes	0.972152	Parulidae	0.9560345	BZWA	0.98303425	comyel	0.9999999	comyel	0.999999881	2023-10-19	4:21:17 AM	Y
303.4	305.2	0	11025	Passeriformes	0.97212934	Parulidae	0.95588064	BZWA	0.98123115	comyel	0.99999905	comyel	0.999999046	2023-10-19	8:51:05 PM	Y
2926.4	2928.2	0	11025	Passeriformes	0.97214466	Parulidae	0.95605344	BZWA	0.98268247	comyel	0.9999993	comyel	0.999999285	2023-10-19	10:34:48 PM	Y
743.8	745.6	0	11025	Passeriformes	0.9595358	Turdidae	0.92805856	GCBI	0.9985196	gycthr	0.9996216	gycthr	0.99962163	2023-10-19	9:58:26 PM	Y
1548.6	1550.4	0	11025	Passeriformes	0.97219604	Cardinalidae	0.99440634	BUNT	0.9935098	indbun	0.9498777	indbun	0.949877679	2023-10-19	12:12:51 AM	Y
1026.2	1028	0	11025	Passeriformes	0.9722252	Passerellidae	0.9954762	DESP	0.99176604	savspa	0.99808586	savspa	0.998085856	2023-10-19	1:04:08 AM	Y
2428.8	2430.6	0	11025	Passeriformes	0.9711079	Passerellidae	0.9936433	DESP	0.9826818	savspa	0.99431	savspa	0.994310021	2023-10-19	4:27:31 AM	Y
1765	1766.8	0	11025	Passeriformes	0.971256	Passerellidae	0.9950788	DESP	0.9904857	savspa	0.9968257	savspa	0.996825695	2023-10-19	6:16:27 AM	Y
2794.4	2795.8	0	11025	Passeriformes	0.97220945	Turdidae	0.9598214			amerob	0.9999999	amerob	0.999999881	2023-10-20	7:32:36 AM	Y
2847	2848.6	0	11025	Passeriformes	0.97216517	Turdidae	0.9581791			amerob	0.99999964	amerob	0.999999642	2023-10-20	7:33:29 AM	Y
3595.6	3597.4	0	11025	Passeriformes	0.972223	Turdidae	0.9597115			amerob	0.9999999	amerob	0.999999881	2023-10-20	7:45:58 AM	Y
206.6	208.4	0	11025	Passeriformes	0.97090876	Turdidae	0.9593775			amerob	0.99999976	amerob	0.999999762	2023-10-20	7:49:29 AM	Y
634.8	636.6	0	11025	Passeriformes	0.9720399	Cardinalidae	0.9943646			dickci	0.9976895	dickci	0.997689486	2023-10-20	7:56:37 AM	Y
638.8	640.6	0	11025	Passeriformes	0.9722271	Cardinalidae	0.9945674			dickci	0.99774015	dickci	0.997740149	2023-10-20	7:56:41 AM	Y
661.6	663	0	11025	Passeriformes	0.9715659	Cardinalidae	0.9942557			dickci	0.9976419	dickci	0.997641921	2023-10-20	7:57:04 AM	Y
1339.8	1341	0	11025	Passeriformes	0.96815354	Turdidae	0.9508904	THSH	0.93603384	herthr	0.9999982	herthr	0.999998212	2023-10-20	11:06:23 PM	Y
674	675.4	0	11025	Passeriformes	0.8847678	Passerellidae	0.9710631	SFHS	0.9547904	whtspa	0.9767131	whtspa	0.976713121	2023-10-20	7:57:16 AM	Y
1358.4	1359.8	0	11025	Passeriformes	0.9380989	Passerellidae	0.97511375			daejun	0.9919778	daejun	0.991977811	2023-10-21	6:04:38 PM	Y

Table 4: 2023 FHBird1 Nighthawk Results - Harbour Hills Wind Project

Project # 25-11682

Begin Time (s)	End Time (s)	Low Freq (Hz)	High Freq (Hz)	Order	Order Probability	Family	Family Probability	Group	Group Probability	Species	Species Probability	Predicted Category	Probability	Date	Time	Annotation
3434.6	3436	0	11025	Passeriformes	0.9722295	Passerellidae	0.9955635	SWLI	0.99708766	linspa	0.964564	linspa	0.964564025	2023-10-21	6:39:15 PM	Y
3379.2	3380.8	0	11025	Charadriiformes	0.9568617	Scolopacidae	0.97234285			sposan	0.99396616	sposan	0.993966162	2023-10-21	3:40:21 AM	Y
2450	2451.4	0	11025	Passeriformes	0.95498496	Turdidae	0.93704325	THSH	0.9196463	swathr	0.8558974	swathr	0.855897427	2023-10-21	9:22:52 PM	Y
2972.4	2973.6	0	11025	Passeriformes	0.9719773	Turdidae	0.9489213			amerob	0.9998518	amerob	0.999851823	2023-10-23	7:30:34 AM	Y
3373.2	3374.8	0	11025	Passeriformes	0.97148794	Parulidae	0.9549493	BZWA	0.9598396	comyel	0.99999833	comyel	0.999998331	2023-10-23	12:37:15 AM	Y
2447.2	2448.8	0	11025	Passeriformes	0.97200453	Passerellidae	0.9955113			daejun	0.99695253	daejun	0.996952534	2023-10-23	7:21:49 AM	Y
3260.6	3262	0	11025	Passeriformes	0.9532262	Passerellidae	0.9921565			daejun	0.9951202	daejun	0.995120227	2023-10-23	7:35:23 AM	Y
2041.2	2043.6	0	11025	Passeriformes	0.94794863	Passerellidae	0.9928363			daejun	0.995494	daejun	0.995494008	2023-10-23	6:13:01 PM	Y
732.6	734.2	0	11025	Charadriiformes	0.9808452	Scolopacidae	0.9953336			greyel	0.999616	greyel	0.999616027	2023-10-23	2:53:15 AM	Y
384.8	386.4	0	11025	Charadriiformes	0.97950405	Scolopacidae	0.993923			greyel	0.9981592	greyel	0.99815923	2023-10-23	6:45:27 PM	Y
413.8	415.6	0	11025	Charadriiformes	0.98141366	Scolopacidae	0.99560565			greyel	0.9996458	greyel	0.999645829	2023-10-23	6:45:56 PM	Y
3029.6	3032	0	11025	Passeriformes	0.9722305	Turdidae	0.95943207			amerob	0.99999976	amerob	0.999999762	2023-10-24	7:29:32 AM	Y
3301.8	3303.4	0	11025	Passeriformes	0.9700205	Turdidae	0.9534162			amerob	0.9999629	amerob	0.999962926	2023-10-24	7:34:04 AM	Y
996.8	999	0	11025	Passeriformes	0.9721921	Turdidae	0.9579701			amerob	0.9999976	amerob	0.999997616	2023-10-24	7:55:39 AM	Y
1068.8	1070.4	0	11025	Passeriformes	0.9702753	Turdidae	0.9526224			amerob	0.99999714	amerob	0.999997139	2023-10-24	7:56:51 AM	Y
2403.6	2405.6	0	11025	Passeriformes	0.96760386	Passerellidae	0.99477035			daejun	0.9962883	daejun	0.9962883	2023-10-24	7:19:06 AM	Y
3384.2	3386.2	0	11025	Passeriformes	0.9722282	Passerellidae	0.995581			daejun	0.99700266	daejun	0.997002661	2023-10-24	7:35:26 AM	Y
3486.2	3488	0	11025	Passeriformes	0.9722021	Passerellidae	0.99558216			daejun	0.99700814	daejun	0.997008145	2023-10-24	7:37:08 AM	Y
3558.2	3560.2	0	11025	Passeriformes	0.97222	Passerellidae	0.99557966			daejun	0.9970072	daejun	0.997007191	2023-10-24	7:38:20 AM	Y
9.6	10.8	0	11025	Passeriformes	0.8871639	Passerellidae	0.9507564			daejun	0.9856302	daejun	0.985630214	2023-10-24	7:39:12 AM	Y
64.2	66	0	11025	Passeriformes	0.9722322	Passerellidae	0.9955883			daejun	0.9970091	daejun	0.997009099	2023-10-24	7:40:06 AM	Y
120.2	122	0	11025	Passeriformes	0.972146	Passerellidae	0.9955591			daejun	0.99699956	daejun	0.996999562	2023-10-24	7:41:02 AM	Y
273	274.8	0	11025	Passeriformes	0.9721743	Passerellidae	0.9955581			daejun	0.9969944	daejun	0.996994376	2023-10-24	7:43:35 AM	Y
422.2	425.8	0	11025	Passeriformes	0.9717794	Passerellidae	0.9955051			daejun	0.99698454	daejun	0.996984541	2023-10-24	7:46:04 AM	Y
1327	1328.8	0	11025	Passeriformes	0.9721267	Passerellidae	0.99555945			daejun	0.99698216	daejun	0.996982157	2023-10-24	5:59:07 PM	Y
1612.4	1614.2	0	11025	Passeriformes	0.97123206	Passerellidae	0.9952662			daejun	0.99686027	daejun	0.996860266	2023-10-24	6:03:52 PM	Y
1808.8	1811.4	0	11025	Passeriformes	0.97223705	Passerellidae	0.99559116			daejun	0.9970113	daejun	0.997011304	2023-10-24	6:07:09 PM	Y
1556.8	1558.2	0	11025	Passeriformes	0.9716476	Cardinalidae	0.9940638			dickci	0.99716336	dickci	0.997163355	2023-10-24	11:03:00 PM	Y
2991	2992.4	0	11025	Passeriformes	0.96425503	Parulidae	0.8341515	DEWA	0.9998491	norpar	0.99785703	norpar	0.997857034	2023-10-24	7:28:53 AM	Y
1219.4	1221	0	11025	Passeriformes	0.9722368	Turdidae	0.89664143			amerob	0.9999734	amerob	0.999973416	2023-10-25	7:57:21 AM	Y
1230.6	1232.4	0	11025	Passeriformes	0.9722038	Turdidae	0.9597695			amerob	0.9999999	amerob	0.999999881	2023-10-25	7:57:33 AM	Y
547.4	549.2	0	11025	Passeriformes	0.97222126	Turdidae	0.95983416			amerob	0.9999999	amerob	0.999999881	2023-10-26	7:45:09 AM	Y
1080.6	1082.4	0	11025	Passeriformes	0.97222733	Turdidae	0.9598498			amerob	0.9999999	amerob	0.999999881	2023-10-26	7:54:03 AM	Y
1138	1139.8	0	11025	Passeriformes	0.9722368	Turdidae	0.95983547			amerob	0.9999999	amerob	0.999999881	2023-10-26	7:55:00 AM	Y
1150.8	1152.4	0	11025	Passeriformes	0.9722286	Turdidae	0.95980287			amerob	0.9999999	amerob	0.999999881	2023-10-26	7:55:13 AM	Y
2256.8	2258.2	0	11025	Passeriformes	0.9622287	Parulidae	0.94678074	BZWA	0.9779007	comyel	0.98814815	comyel	0.988148153	2023-10-26	10:11:39 PM	Y
625	628	0	11025	Passeriformes	0.97222924	Passerellidae	0.99558616			daejun	0.9970114	daejun	0.997011423	2023-10-26	7:46:27 AM	Y
1366.4	1369	0	11025	Passeriformes	0.96972847	Passerellidae	0.99505484			daejun	0.99688846	daejun	0.996888459	2023-10-26	7:58:48 AM	Y
878	879.6	0	11025	Passeriformes	0.96830976	Turdidae	0.95224875	THSH	0.935683	herthr	0.99999595	herthr	0.999995947	2023-10-26	6:50:40 AM	Y
1693	1694.8	0	11025	Passeriformes	0.97223705	Turdidae	0.95982295			amerob	0.9999999	amerob	0.999999881	2023-10-27	8:02:15 AM	Y
630.8	632.4	0	11025	Passeriformes	0.9693374	Passerellidae	0.99496114			daejun	0.99680173	daejun	0.996801734	2023-10-27	7:44:33 AM	Y
1749.2	1750.8	0	11025	Passeriformes	0.9507441	Passerellidae	0.9833028			daejun	0.9882429	daejun	0.988242924	2023-10-27	8:03:11 AM	Y
660	661.2	1533.913	11025	Charadriiformes	0.9764163	Scolopacidae	0.9921401			greyel	0.9987877	greyel	0.998787701	2023-10-28	7:44:02 AM	Y
1897.8	1899.6	0	11025	Passeriformes	0.970588	Passerellidae	0.9946143	DESP	0.9905592	savspa	0.99774384	savspa	0.997743845	2023-10-29	12:02:40 AM	Y
1026.6	1028.2	0	11025	Passeriformes	0.97221833	Turdidae	0.95777935			amerob	0.99999976	amerob	0.999999762	2023-11-01	7:44:09 AM	Y
1561.4	1563.2	0	11025	Passeriformes	0.97221756	Turdidae	0.9597532			amerob	0.9999999	amerob	0.999999881	2023-11-01	7:53:03 AM	Y
2067.2	2068.4	0	11025	Passeriformes	0.97221667	Turdidae	0.948997			amerob	0.99989104	amerob	0.999891043	2023-11-01	8:01:29 AM	Y
2649	2650.6	0	11025	Passeriformes	0.9692266	Passerellidae	0.99512625			daejun	0.9968574	daejun	0.996857405	2023-11-01	8:11:11 AM	Y
856.8	858.4	0	11025	Passeriformes	0.9722226	Turdidae	0.9584968			amerob	0.9999995	amerob	0.999999523	2023-11-03	7:38:19 AM	Y
861.4	862.8	0	11025	Passeriformes	0.96685666	Turdidae	0.95927024			amerob	0.99999714	amerob	0.999997139	2023-11-03	7:38:23 AM	Y
882.8	884.2	0	11025	Passeriformes	0.9719805	Turdidae	0.95541537			amerob	0.9999988	amerob	0.999998808	2023-11-03	7:38:45 AM	Y
2541.2	2542.8	0	11025	Passeriformes	0.9708483	Turdidae	0.9584056			amerob	0.99999523	amerob	0.999995232	2023-11-03	8:06:23 AM	Y
3074.8	3076.2	0	11025	Passeriformes	0.9721342	Turdidae	0.95241386			amerob	0.9987471	amerob	0.99874711	2023-11-03	8:15:17 AM	Y

Table 4: 2023 FHBird1 Nighthawk Results - Harbour Hills Wind Project

Project # 25-11682

Begin Time (s)	End Time (s)	Low Freq (Hz)	High Freq (Hz)	Order	Order Probability	Family	Family Probability	Group	Group Probability	Species	Species Probability	Predicted Category	Probability	Date	Time	Annotation
1356.2	1357.8	0	11025	Passeriformes	0.97207785	Passerellidae	0.9954567	CUPS	0.98857516	amtspa	0.998946	amtspa	0.998946011	2023-11-03	7:46:38 AM	Y
1370	1371.8	0	11025	Passeriformes	0.9716751	Passerellidae	0.99540436	CUPS	0.9889234	amtspa	0.9990221	amtspa	0.999022126	2023-11-03	7:46:52 AM	Y
13.2	15	0	11025	Passeriformes	0.97198886	Passerellidae	0.99550503	CUPS	0.98906296	amtspa	0.9990336	amtspa	0.99903357	2023-11-04	7:22:15 AM	Y
3458.6	3460	0	11025	Passeriformes	0.9654448	Parulidae	0.940923	BZWA	0.950391	comyel	0.99038273	comyel	0.990382731	2023-11-04	3:19:41 AM	Y
2012.4	2014.2	0	11025	Passeriformes	0.9717075	Motacillidae	0.93710166			amepip	0.96572936	amepip	0.965729356	2023-11-05	7:54:34 AM	Y
2017	2018.6	0	11025	Passeriformes	0.9702536	Motacillidae	0.93613577			amepip	0.9626921	amepip	0.962692082	2023-11-05	7:54:39 AM	Y
1108.8	1110.8	0	11025	Passeriformes	0.97222507	Motacillidae	0.9376727			amepip	0.96915764	amepip	0.969157636	2023-11-05	7:39:31 AM	Y
1111.2	1113	0	11025	Passeriformes	0.97216946	Motacillidae	0.93755454			amepip	0.96746594	amepip	0.967465937	2023-11-05	7:39:33 AM	Y
3056.8	3058.4	0	11025	Passeriformes	0.9718552	Passerellidae	0.99551576	CUPS	0.9891215	amtspa	0.99902177	amtspa	0.999021769	2023-11-06	8:10:59 AM	Y
2102.8	2104.6	0	11025	Passeriformes	0.9714201	Passerellidae	0.9948348	CUPS	0.985393	chispa	0.9385385	chispa	0.938538492	2023-11-10	6:50:05 AM	Y
933.6	935.4	0	11025	Passeriformes	0.9721522	Passerellidae	0.99556386	CUPS	0.98923606	amtspa	0.9990363	amtspa	0.999036312	2023-11-11	7:28:36 AM	Y
2791.4	2794.6	0	11025	Passeriformes	0.9648144	Passerellidae	0.9947785	CUPS	0.9868727	amtspa	0.9989336	amtspa	0.998933613	2023-11-15	7:55:33 AM	Y
2907.2	2909	0	11025	Passeriformes	0.9720081	Passerellidae	0.9954845	CUPS	0.98907894	amtspa	0.99902904	amtspa	0.99902904	2023-11-15	7:57:29 AM	Y
1034.8	1037	0	11025	Passeriformes	0.9714633	Passerellidae	0.9946338	CUPS	0.98734856	amtspa	0.99896955	amtspa	0.998969555	2023-11-18	5:22:15 PM	Y
1115.4	1117.2	0	11025	Passeriformes	0.97202986	Passerellidae	0.9953779	CUPS	0.9888144	amtspa	0.9990337	amtspa	0.999033689	2023-11-18	5:23:35 PM	Y
1472.8	1474.6	0	11025	Passeriformes	0.9721156	Passerellidae	0.9955384	CUPS	0.98921597	amtspa	0.99904126	amtspa	0.999041259	2023-11-18	5:29:33 PM	Y
777.4	779.4	0	11025	Passeriformes	0.9715029	Passerellidae	0.99530774	CUPS	0.98837876	amtspa	0.999008	amtspa	0.999008	2023-11-20	8:02:13 AM	Y
801.6	803.2	0	11025	Passeriformes	0.96991223	Passerellidae	0.9950906	CUPS	0.9867666	amtspa	0.9989417	amtspa	0.99894172	2023-11-20	8:02:38 AM	Y
1023.2	1026	0	11025	Passeriformes	0.97202975	Passerellidae	0.9952034			daejun	0.99693346	daejun	0.99693346	2023-11-20	8:06:19 AM	Y
29.8	31.4	0	11025	Passeriformes	0.97210896	Passerellidae	0.9954005	SFHS	0.9897161	whtspa	0.9983633	whtspa	0.998363316	2023-11-20	7:49:46 AM	Y

Table 5: 2023 IRRBird1 Nighthawk Results - Harbour Hills Wind Project

Begin Time (s)	End Time (s)	Low Freq (Hz)	High Freq (Hz)	Order	Order Probability	Family	Family Probability	Group	Group Probability	Species	Species Probability	Predicted Category	Probability	Date	Time	Annotation
990.2	992	0	11025	Passeriformes	0.97221416	Parulidae	0.9563811			amered	0.9031519	amered	0.903151929	2023-05-29	3:30:32 AM	Y
2874.4	2875.8	0	11025	Passeriformes	0.97185034	Parulidae	0.9557155			amered	0.87404877	amered	0.874048769	2023-05-29	4:01:56 AM	Y
1428.2	1430.6	0	11025	Passeriformes	0.9502449	Parulidae	0.9454191			amered	0.89010596	amered	0.890105963	2023-05-30	5:38:50 AM	Y
1496	1497.4	0	11025	Passeriformes	0.9720799	Turdidae	0.95875067			amerob	0.9999989	amerob	0.999998927	2023-05-29	5:38:58 AM	Y
2690.2	2691.4	0	11025	Passeriformes	0.9646386	Turdidae	0.89504063			amerob	0.99597126	amerob	0.995971262	2023-05-30	3:59:52 AM	Y
3200.6	3202	0	11025	Passeriformes	0.9718659	Turdidae	0.9597417			amerob	0.9999999	amerob	0.999999881	2023-05-31	4:09:23 AM	Y
1379	1380.4	0	11025	Passeriformes	0.9700328	Turdidae	0.95407116			amerob	0.9998474	amerob	0.999847412	2023-06-02	5:41:01 AM	Y
1386	1387.4	0	11025	Passeriformes	0.97196376	Turdidae	0.9592713			amerob	0.99999976	amerob	0.999999762	2023-06-02	5:41:08 AM	Y
2860	2861.4	0	11025	Passeriformes	0.96907365	Turdidae	0.95646286			amerob	0.99999845	amerob	0.99999845	2023-06-05	4:07:42 AM	Y
1718.6	1720	0	11025	Passeriformes	0.9705978	Parulidae	0.9527553			bawwar	0.99860305	bawwar	0.998603046	2023-05-27	4:40:41 AM	Y
1285.4	1287	0	11025	Passeriformes	0.9713544	Parulidae	0.9547437			bawwar	0.99999964	bawwar	0.999999642	2023-05-28	4:34:27 AM	Y
2108.2	2109.6	0	11025	Passeriformes	0.9700229	Parulidae	0.955117			bawwar	0.9999554	bawwar	0.999955416	2023-05-28	4:48:10 AM	Y
2255.4	2257.2	0	11025	Passeriformes	0.9721814	Parulidae	0.95636684			bawwar	0.99999976	bawwar	0.999999762	2023-05-28	4:50:37 AM	Y
91.8	93.4	0	11025	Passeriformes	0.9722304	Parulidae	0.95641816			bawwar	0.9999956	bawwar	0.999995589	2023-05-31	4:17:34 AM	Y
1973.6	1974.8	0	11025	Passeriformes	0.9680039	Parulidae	0.9470159			bawwar	0.9998965	bawwar	0.999896526	2023-05-31	4:48:56 AM	Y
2327.2	2328.8	0	11025	Passeriformes	0.9716951	Parulidae	0.9558856			bawwar	0.99999964	bawwar	0.999999642	2023-05-31	4:54:49 AM	Y
3132.8	3134.6	0	11025	Passeriformes	0.96949995	Parulidae	0.95420295			bawwar	0.9997812	bawwar	0.999781191	2023-05-31	5:08:15 AM	Y
885	886.4	0	11025	Passeriformes	0.9697446	Parulidae	0.9522689			canwar	0.97062904	canwar	0.970629036	2023-05-26	12:25:47 AM	Y
3235.4	3237	0	11025	Passeriformes	0.97168094	Parulidae	0.9535623			canwar	0.99627423	canwar	0.996274233	2023-05-31	12:09:57 AM	Y
2401	2402.6	0	11025	Passeriformes	0.9721143	Parulidae	0.95508426			canwar	0.9964797	canwar	0.99647969	2023-05-31	1:56:04 AM	Y
3364.8	3366.4	0	11025	Passeriformes	0.9716854	Parulidae	0.94599056			canwar	0.9918426	canwar	0.991842628	2023-05-31	2:12:08 AM	Y
1576.6	1578.4	0	11025	Passeriformes	0.9720844	Parulidae	0.9559495	BZWA	0.9826638	comyel	0.9978531	comyel	0.9978531	2023-05-27	3:38:19 AM	Y
2259.8	2261	0	11025	Passeriformes	0.96455806	Parulidae	0.9422876	BZWA	0.97070396	comyel	0.98549753	comyel	0.985497534	2023-05-27	3:49:42 AM	Y
998.2	999.6	0	11025	Passeriformes	0.97201806	Parulidae	0.95550156	BZWA	0.97524965	comyel	0.99999595	comyel	0.999995947	2023-05-31	1:32:41 AM	Y
2396.2	2398	0	11025	Passeriformes	0.9719526	Parulidae	0.9552377	BZWA	0.9793109	comyel	0.9999982	comyel	0.999998212	2023-05-31	1:55:59 AM	Y
3232.2	3234	0	11025	Passeriformes	0.9721904	Parulidae	0.95615107	BZWA	0.9829775	comyel	0.9999999	comyel	0.999999881	2023-05-31	2:09:55 AM	Y
2922.6	2924	0	11025	Passeriformes	0.96752095	Passerellidae	0.99392384			daejun	0.9960155	daejun	0.996015489	2023-05-26	4:59:45 AM	Y
3046.4	3047.8	0	11025	Passeriformes	0.96235687	Passerellidae	0.9925599			daejun	0.993725	daejun	0.993725002	2023-05-26	5:01:48 AM	Y
3087	3088.4	0	11025	Passeriformes	0.9720399	Passerellidae	0.9953178			daejun	0.99674463	daejun	0.996744633	2023-05-26	5:02:29 AM	Y
3095	3096.2	0	11025	Passeriformes	0.95114356	Passerellidae	0.9876551			daejun	0.957815	daejun	0.957814991	2023-05-26	5:02:37 AM	Y
3107.4	3108.8	0	11025	Passeriformes	0.9689858	Passerellidae	0.9947714			daejun	0.99607205	daejun	0.996072054	2023-05-26	5:02:49 AM	Y
3114.6	3116.2	0	11025	Passeriformes	0.9646913	Passerellidae	0.98092365			daejun	0.9801272	daejun	0.980127215	2023-05-26	5:02:57 AM	Y
222.4	224	0	11025	Passeriformes	0.9720267	Passerellidae	0.9955319			daejun	0.99699247	daejun	0.996992469	2023-05-26	5:14:44 AM	Y
1784	1785.6	0	11025	Passeriformes	0.9683021	Passerellidae	0.9949058			daejun	0.9964498	daejun	0.996449828	2023-05-27	4:41:46 AM	Y
1798	1800	0	11025	Passeriformes	0.9566991	Passerellidae	0.9770183			daejun	0.98710144	daejun	0.987101436	2023-05-27	4:42:00 AM	Y
1802.2	1803.4	0	11025	Passeriformes	0.97196555	Passerellidae	0.9955473			daejun	0.99699354	daejun	0.996993542	2023-05-27	4:42:04 AM	Y
1814	1816	0	11025	Passeriformes	0.9721737	Passerellidae	0.99557626			daejun	0.9969909	daejun	0.996990919	2023-05-27	4:42:16 AM	Y
1822.8	1824.8	0	11025	Passeriformes	0.97159755	Passerellidae	0.99487007			daejun	0.99650747	daejun	0.996507466	2023-05-27	4:42:25 AM	Y
574.6	576.6	0	11025	Passeriformes	0.9716034	Passerellidae	0.995462			daejun	0.9969446	daejun	0.996944606	2023-05-27	5:21:37 AM	Y
580.2	581.6	0	11025	Passeriformes	0.96064866	Passerellidae	0.9922733			daejun	0.9930997	daejun	0.993099689	2023-05-28	4:22:42 AM	Y
1135.2	1136.8	0	11025	Passeriformes	0.9578899	Passerellidae	0.99284256			daejun	0.99562943	daejun	0.99562943	2023-05-28	4:31:57 AM	Y
1250	1251.8	0	11025	Passeriformes	0.9722343	Passerellidae	0.9955909			daejun	0.9970114	daejun	0.997011423	2023-05-28	4:33:52 AM	Y
1276.6	1278.2	0	11025	Passeriformes	0.91720545	Passerellidae	0.86803997			daejun	0.9071471	daejun	0.90714711	2023-05-28	4:34:19 AM	Y
1298.6	1300.2	0	11025	Passeriformes	0.9687015	Passerellidae	0.9948828			daejun	0.9962004	daejun	0.996200383	2023-05-28	4:34:41 AM	Y
1640.6	1642.4	0	11025	Passeriformes	0.96806693	Passerellidae	0.99469805			daejun	0.9965848	daejun	0.996584773	2023-05-28	4:40:23 AM	Y
1668.4	1670	0	11025	Passeriformes	0.96436244	Passerellidae	0.99282634			daejun	0.99490523	daejun	0.994905233	2023-05-28	4:40:50 AM	Y
1689.2	1691.2	0	11025	Passeriformes	0.97130686	Passerellidae	0.9954335			daejun	0.9968375	daejun	0.996837497	2023-05-28	4:41:11 AM	Y
1696.6	1698	0	11025	Passeriformes	0.97144455	Passerellidae	0.9954373			daejun	0.99686027	daejun	0.996860266	2023-05-28	4:41:19 AM	Y
1703.4	1705.2	0	11025	Passeriformes	0.972154	Passerellidae	0.99557096			daejun	0.99700373	daejun	0.997003734	2023-05-28	4:41:25 AM	Y
1723.6	1725.4	0	11025	Passeriformes	0.9717031	Passerellidae	0.9953086			daejun	0.99682885	daejun	0.996828854	2023-05-28	4:41:46 AM	Y
1727.4	1728.8	0	11025	Passeriformes	0.9712667	Passerellidae	0.99544805			daejun	0.9968516	daejun	0.996851623	2023-05-28	4:41:49 AM	Y
1748.4	1750	0	11025	Passeriformes	0.9721019	Passerellidae	0.9955462			daejun	0.9969694	daejun	0.996969402	2023-05-28	4:42:10 AM	Y
1759.4	1760.8	0	11025	Passeriformes	0.96544546	Passerellidae	0.99432796			daejun	0.9962012	daejun	0.996201217	2023-05-28	4:42:21 AM	Y
1774	1775.8	0	11025	Passeriformes	0.97216976	Passerellidae	0.9955642			daejun	0.99699414	daejun	0.996994138	2023-05-28	4:42:36 AM	Y
1796.8	1798.2	0	11025	Passeriformes	0.972049	Passerellidae	0.99555784			daejun	0.99700123	daejun	0.997001231	2023-05-28	4:42:59 AM	Y
1801.2	1802.8	0	11025	Passeriformes	0.9690647	Passerellidae	0.99447167			daejun	0.9959448	daejun	0.995944798	2023-05-28	4:43:03 AM	Y
1814.4	1816.2	0	11025	Passeriformes	0.972129	Passerellidae	0.9955527			daejun	0.99698776	daejun	0.99698776	2023-05-28	4:43:16 AM	Y
1821.6	1823.4	0	11025	Passeriformes	0.97204673	Passerellidae	0.9954888			daejun	0.996962	daejun	0.996962011	2023-05-28	4:43:24 AM	Y
1824.8	1826.8	0	11025	Passeriformes	0.97222376	Passerellidae	0.9955888			daejun	0.9970106	daejun	0.997010589	2023-05-28	4:43:27 AM	Y
1830.8	1832.4	0	11025	Passeriformes	0.9718542	Passerellidae	0.9954939			daejun	0.9969548	daejun	0.996954799	2023-05-28	4:43:33 AM	Y
1833.8	1835.4	0	11025	Passeriformes	0.97222996	Passerellidae	0.9955837			daejun	0.99699616	daejun	0.996996164	2023-05-28	4:43:36 AM	Y
1836.8	1838.6	0	11025	Passeriformes	0.9706643	Passerellidae	0.99505603			daejun	0.99628544	daejun	0.996285439	2023-05-28	4:43:39 AM	Y
1845.2	1847	0	11025	Passeriformes	0.97159487	Passerellidae	0.9955135			daejun	0.99697816	daejun	0.996978164	2023-05-28	4:43:47 AM	Y

Table 5: 2023 IRRBird1 Nighthawk Results - Harbour Hills Wind Project

Begin Time (s)	End Time (s)	Low Freq (Hz)	High Freq (Hz)	Order	Order Probability	Family	Family Probability	Group	Group Probability	Species	Species Probability	Predicted Category	Probability	Date	Time	Annotation
1848.6	1851	0	11025	Passeriformes	0.9722368	Passerellidae	0.9955914			daejun	0.997012	daejun	0.997012019	2023-05-28	4:43:51 AM	Y
1854.2	1855.8	0	11025	Passeriformes	0.96554583	Passerellidae	0.99298614			daejun	0.9958081	daejun	0.995808125	2023-05-28	4:43:56 AM	Y
1859.2	1861	0	11025	Passeriformes	0.9717795	Passerellidae	0.9955249			daejun	0.99698037	daejun	0.996980369	2023-05-28	4:44:01 AM	Y
1868.8	1872.4	0	11025	Passeriformes	0.97220254	Passerellidae	0.995574			daejun	0.996997	daejun	0.996996999	2023-05-28	4:44:11 AM	Y
1878.6	1880.6	0	11025	Passeriformes	0.9720347	Passerellidae	0.99550086			daejun	0.99692935	daejun	0.996929348	2023-05-28	4:44:21 AM	Y
1885.6	1887.6	0	11025	Passeriformes	0.9718588	Passerellidae	0.995492			daejun	0.99689734	daejun	0.99689734	2023-05-28	4:44:28 AM	Y
1970.6	1972.4	0	11025	Passeriformes	0.9321378	Passerellidae	0.984602			daejun	0.991366	daejun	0.991366029	2023-05-28	4:45:53 AM	Y
2009.4	2011	0	11025	Passeriformes	0.96538025	Passerellidae	0.9939831			daejun	0.9949378	daejun	0.994937778	2023-05-28	4:46:31 AM	Y
2036	2037.8	0	11025	Passeriformes	0.9718836	Passerellidae	0.99553704			daejun	0.99687344	daejun	0.996873438	2023-05-28	4:46:58 AM	Y
2093.2	2095	0	11025	Passeriformes	0.9722081	Passerellidae	0.9955884			daejun	0.99700195	daejun	0.997001946	2023-05-28	4:47:55 AM	Y
2124.4	2126.2	0	11025	Passeriformes	0.9720704	Passerellidae	0.99467623			daejun	0.9962529	daejun	0.996252894	2023-05-28	4:48:26 AM	Y
2132.4	2134.2	0	11025	Passeriformes	0.96990055	Passerellidae	0.9948767			daejun	0.99600923	daejun	0.996009231	2023-05-28	4:48:34 AM	Y
1278.4	1281.8	0	11025	Charadriiformes	0.9814704	Scolopacidae	0.99570423			greyel	0.9997737	greyel	0.999773681	2023-05-26	4:32:20 AM	Y
604.4	605.6	0	11025	Charadriiformes	0.9652837	Scolopacidae	0.9916937			greyel	0.9017103	greyel	0.901710272	2023-05-31	5:26:06 AM	Y
625.4	627.4	0	11025	Charadriiformes	0.9814705	Scolopacidae	0.9956939			greyel	0.9997589	greyel	0.999758899	2023-05-31	5:26:27 AM	Y
631.4	633.2	0	11025	Charadriiformes	0.98141414	Scolopacidae	0.99568534			greyel	0.9997305	greyel	0.999730527	2023-05-31	5:26:33 AM	Y
633.8	638.8	0	11025	Charadriiformes	0.9814658	Scolopacidae	0.99570364			greyel	0.99982184	greyel	0.999821842	2023-05-31	5:26:36 AM	Y
1325.2	1326.6	0	11025	Charadriiformes	0.9811761	Scolopacidae	0.9955895			greyel	0.99950206	greyel	0.999502063	2023-05-31	5:38:07 AM	Y
1363.4	1365.2	0	11025	Charadriiformes	0.98108727	Scolopacidae	0.9955422			greyel	0.99962115	greyel	0.999621153	2023-05-31	5:38:45 AM	Y
1380.6	1383.4	0	11025	Charadriiformes	0.9813648	Scolopacidae	0.99569005			greyel	0.99977046	greyel	0.999770463	2023-05-31	5:39:03 AM	Y
1389.4	1391.2	0	11025	Charadriiformes	0.9813763	Scolopacidae	0.99567646			greyel	0.9997919	greyel	0.99979192	2023-05-31	5:39:11 AM	Y
1401.6	1403.2	0	11025	Charadriiformes	0.9812122	Scolopacidae	0.99564385			greyel	0.99972016	greyel	0.999720156	2023-05-31	5:39:24 AM	Y
2978.8	2983.8	0	11025	Charadriiformes	0.9814	Scolopacidae	0.99565095			greyel	0.9997967	greyel	0.999796689	2023-06-04	5:09:41 AM	Y
2987	2988.6	0	11025	Charadriiformes	0.98121566	Scolopacidae	0.9956228			greyel	0.999721	greyel	0.999720991	2023-06-04	5:09:49 AM	Y
2989.2	2991	0	11025	Charadriiformes	0.9812416	Scolopacidae	0.99563205			greyel	0.9997856	greyel	0.999785602	2023-06-04	5:09:51 AM	Y
2992.8	2997.2	0	11025	Charadriiformes	0.9814105	Scolopacidae	0.9956903			greyel	0.9998273	greyel	0.999827325	2023-06-04	5:09:55 AM	Y
3000.6	3002	0	11025	Charadriiformes	0.97973347	Scolopacidae	0.99526983			greyel	0.99582314	greyel	0.995823145	2023-06-04	5:10:03 AM	Y
3009.8	3012.6	0	11025	Charadriiformes	0.9814798	Scolopacidae	0.99572253			greyel	0.9998317	greyel	0.999831676	2023-06-04	5:10:12 AM	Y
3014.4	3017	0	11025	Charadriiformes	0.9804208	Scolopacidae	0.995404			greyel	0.9995808	greyel	0.999580801	2023-06-04	5:10:16 AM	Y
3017.6	3019.4	0	11025	Charadriiformes	0.9814494	Scolopacidae	0.9957029			greyel	0.9996804	greyel	0.9996804	2023-06-04	5:10:20 AM	Y
3022.2	3024	0	11025	Charadriiformes	0.98148215	Scolopacidae	0.9957182			greyel	0.99974877	greyel	0.999748766	2023-06-04	5:10:24 AM	Y
3024.4	3026	0	11025	Charadriiformes	0.979957	Scolopacidae	0.9953387			greyel	0.99528295	greyel	0.995282948	2023-06-04	5:10:26 AM	Y
358	359.4	0	11025	Passeriformes	0.9154411	Turdidae	0.88042116	THSH	0.8431945	herthr	0.9999968	herthr	0.999996781	2023-05-29	4:20:00 AM	Y
363.2	364.6	0	11025	Passeriformes	0.9667303	Turdidae	0.9507164	THSH	0.9343736	herthr	0.9999988	herthr	0.999998808	2023-05-29	4:20:05 AM	Y
2313.8	2315.2	0	11025	Passeriformes	0.96612775	Turdidae	0.9459468	THSH	0.9301756	herthr	0.99999857	herthr	0.999998569	2023-05-30	5:53:36 AM	Y
2375.6	2377	0	11025	Passeriformes	0.9696997	Turdidae	0.9554122	THSH	0.94096977	herthr	0.99999845	herthr	0.99999845	2023-05-30	5:54:38 AM	Y
3212.8	3214.2	0	11025	Passeriformes	0.9618346	Turdidae	0.9379555	THSH	0.9053571	herthr	0.99999785	herthr	0.999997854	2023-05-31	5:09:35 AM	Y
3221.6	3223	0	11025	Passeriformes	0.970939	Turdidae	0.958194	THSH	0.94457924	herthr	0.99999989	herthr	0.9999998927	2023-05-31	5:09:44 AM	Y
1972	1973.2	0	11025	Passeriformes	0.9553799	Turdidae	0.9368289	THSH	0.9097834	herthr	0.9999982	herthr	0.999998212	2023-05-31	5:48:54 AM	Y
1789.8	1791.2	0	11025	Passeriformes	0.9418523	Turdidae	0.88512635	THSH	0.8106698	herthr	0.9998035	herthr	0.999803483	2023-06-03	4:48:52 AM	Y
1794.4	1795.8	0	11025	Passeriformes	0.9638103	Turdidae	0.93779606	THSH	0.91614836	herthr	0.99999774	herthr	0.999997735	2023-06-03	4:48:56 AM	Y
267.8	269.4	0	11025	Passeriformes	0.9722189	Parulidae	0.9564317	DBUP	0.9571725	naswar	0.972391	naswar	0.972391009	2023-05-27	5:16:30 AM	Y
1375	1376.6	0	11025	Passeriformes	0.9720176	Parulidae	0.9368372	DEWA	0.99997365	norpar	0.9995796	norpar	0.999579608	2023-05-31	11:39:57 PM	Y
2258.6	2259.8	0	11025	Passeriformes	0.97198796	Parulidae	0.95270973	ZEEP	0.954884	norwat	0.997163	norwat	0.997162998	2023-05-27	9:50:41 PM	Y
590.4	592	0	11025	Passeriformes	0.97209394	Parulidae	0.9557245	SBUF	0.9397155	ovenbi1	0.9751372	ovenbi1	0.975137174	2023-05-26	5:20:52 AM	Y
593.2	596.2	0	11025	Passeriformes	0.97222215	Parulidae	0.9562356	SBUF	0.94155204	ovenbi1	0.9851644	ovenbi1	0.985164404	2023-05-26	5:20:55 AM	Y
1061.4	1063	0	11025	Passeriformes	0.972141	Parulidae	0.9560671	SBUF	0.934875	ovenbi1	0.95146	ovenbi1	0.951460004	2023-05-27	9:30:43 PM	Y
573.2	574.8	0	11025	Passeriformes	0.9717971	Parulidae	0.95508295	SBUF	0.9371285	ovenbi1	0.9676379	ovenbi1	0.967637897	2023-05-31	4:25:35 AM	Y
604.8	606	0	11025	Passeriformes	0.9663982	Parulidae	0.9496529	SBUF	0.92035824	ovenbi1	0.8972982	ovenbi1	0.897298217	2023-05-31	4:26:07 AM	Y
1981.8	1983.4	0	11025	Passeriformes	0.9712629	Parulidae	0.9533713	SBUF	0.933729	ovenbi1	0.9330241	ovenbi1	0.933024108	2023-05-31	4:49:04 AM	Y
2587.4	2589	0	11025	Passeriformes	0.9651401	Passerellidae	0.9629242	DESP	0.98632564	savspa	0.96742177	savspa	0.96742177	2023-06-06	5:04:09 AM	Y
2674.2	2676	0	11025	Passeriformes	0.9662275	Passerellidae	0.99351394	DESP	0.98829424	savspa	0.9971016	savspa	0.997101605	2023-06-06	5:05:36 AM	Y
2013.8	2015.4	0	11025	Charadriiformes	0.9787168	Scolopacidae	0.99442154			sposan	0.9991217	sposan	0.999121726	2023-05-29	11:48:36 PM	Y
2764.2	2766.8	0	11025	Charadriiformes	0.98146296	Scolopacidae	0.995672			sposan	0.9995285	sposan	0.999528527	2023-06-01	12:03:06 AM	Y
999	1000.4	0	11025	Passeriformes	0.97021174	Passerellidae	0.9949714	SFHS	0.988345	whtspa	0.99403	whtspa	0.994029999	2023-05-26	4:27:41 AM	Y
1964.4	1965.6	0	11025	Passeriformes	0.9703296	Passerellidae	0.9939955	SFHS	0.98630965	whtspa	0.986356	whtspa	0.98635602	2023-05-26	4:43:46 AM	Y
1968.8	1970.4	0	11025	Passeriformes	0.966818	Passerellidae	0.99424535	SFHS	0.9889908	whtspa	0.9967073	whtspa	0.99670732	2023-05-26	4:43:51 AM	Y
1982	1983.8	0	11025	Passeriformes	0.9710197	Passerellidae	0.9951349	SFHS	0.9877444	whtspa	0.9972084	whtspa	0.997208416	2023-05-26	4:44:04 AM	Y
842	843.8	0	11025	Passeriformes	0.9719814	Passerellidae	0.9954242	SFHS	0.9898896	whtspa	0.9983333	whtspa	0.998333275	2023-05-26	5:25:04 AM	Y
853	854.8	0	11025	Passeriformes	0.9720443	Passerellidae	0.9953112	SFHS	0.98956954	whtspa	0.9981665	whtspa	0.998166502	2023-05-26	5:25:15 AM	Y
856.6	858.4	0	11025	Passeriformes	0.9721848	Passerellidae	0.99555737	SFHS	0.9898533	whtspa	0.9964489	whtspa	0.996448874	2023-05-26	5:25:19 AM	Y
2763	2764.8	0	11025	Passeriformes	0.97215897	Passerellidae	0.995503	SFHS	0.98995376	whtspa	0.99846256	whtspa	0.998462558	2023-05-27	4:58:05 AM	Y
2769.4	2770.8	0	11025	Passeriformes	0.9703696	Passerellidae	0.99498713	SFHS	0.9870832	whtspa	0.98087573	whtspa	0.980875731	2023-05-27	4:58:11 AM	Y

Table 5: 2023 IRRBird1 Nighthawk Results - Harbour Hills Wind Project

Begin Time (s)	End Time (s)	Low Freq (Hz)	High Freq (Hz)	Order	Order Probability	Family	Family Probability	Group	Group Probability	Species	Species Probability	Predicted Category	Probability	Date	Time	Annotation
2814.8	2816.4	0	11025	Passeriformes	0.96718764	Passerellidae	0.9943768	SFHS	0.9874858	whtspa	0.99602	whtspa	0.996020019	2023-05-27	4:58:57 AM	Y
3062.2	3063.6	0	11025	Passeriformes	0.9620645	Passerellidae	0.99011564	SFHS	0.9639098	whtspa	0.9577159	whtspa	0.957715929	2023-05-27	5:03:04 AM	Y
1687.2	1689	0	11025	Passeriformes	0.97214544	Passerellidae	0.99548113	SFHS	0.98997736	whtspa	0.9983814	whtspa	0.998381376	2023-05-28	4:41:09 AM	Y
1704.6	1706.4	0	11025	Passeriformes	0.9713438	Passerellidae	0.9951879	SFHS	0.98863363	whtspa	0.9970252	whtspa	0.997025192	2023-05-28	4:41:27 AM	Y
1723	1724.4	0	11025	Passeriformes	0.9686826	Passerellidae	0.99413514	SFHS	0.9884625	whtspa	0.9949161	whtspa	0.994916081	2023-05-28	4:41:45 AM	Y
1730.2	1732	0	11025	Passeriformes	0.9711495	Passerellidae	0.9953489	SFHS	0.9890267	whtspa	0.99607253	whtspa	0.996072531	2023-05-28	4:41:52 AM	Y
1766.6	1768	0	11025	Passeriformes	0.94957983	Passerellidae	0.9903998	SFHS	0.9833103	whtspa	0.99171925	whtspa	0.991719246	2023-05-28	4:42:29 AM	Y
1972.8	1974.6	0	11025	Passeriformes	0.9661273	Passerellidae	0.9930292	SFHS	0.98714334	whtspa	0.9956393	whtspa	0.995639324	2023-05-28	4:45:55 AM	Y
934.4	936.2	0	11025	Passeriformes	0.97129786	Passerellidae	0.9953695	SFHS	0.9895515	whtspa	0.99832076	whtspa	0.998320758	2023-05-28	5:28:36 AM	Y
2364.2	2365.6	0	11025	Passeriformes	0.9564731	Turdidae	0.94652444			amerob	0.99982697	amerob	0.999826968	2023-06-07	5:01:26 AM	Y
258.6	260	0	11025	Charadriiformes	0.9764364	Scolopacidae	0.9935283			greyel	0.9879732	greyel	0.987973213	2023-06-08	3:27:21 AM	Y
1933.2	1934.6	0	11025	Passeriformes	0.9722377	Turdidae	0.9587054			amerob	0.99999976	amerob	0.999999762	2023-06-09	4:55:15 AM	Y
3201.8	3203.4	0	11025	Passeriformes	0.9719059	Turdidae	0.9494802			amerob	0.99998045	amerob	0.99998045	2023-06-09	5:16:24 AM	Y
1785.8	1787.6	0	11025	Charadriiformes	0.9814145	Scolopacidae	0.99567956			greyel	0.9998155	greyel	0.999815524	2023-06-09	4:52:48 AM	Y
764.4	766	0	11025	Charadriiformes	0.9805109	Scolopacidae	0.99523336			greyel	0.99965477	greyel	0.99965477	2023-06-16	5:39:46 AM	Y
1944.2	1945.8	0	11025	Passeriformes	0.9722358	Turdidae	0.9598426			amerob	0.9999999	amerob	0.999999881	2023-07-12	8:57:24 PM	Y
1965.6	1967.2	0	11025	Passeriformes	0.9722287	Turdidae	0.95969635			amerob	0.9999999	amerob	0.999999881	2023-07-12	8:57:46 PM	Y
2336	2337.6	0	11025	Passeriformes	0.9720915	Turdidae	0.9596142			amerob	0.99999976	amerob	0.999999762	2023-07-12	9:03:56 PM	Y
2488.8	2491	0	11025	Charadriiformes	0.9814906	Scolopacidae	0.9957272			solsan	0.97617245	solsan	0.976172447	2023-07-15	4:05:31 AM	Y
1022.6	1024.2	0	11025	Charadriiformes	0.96596843	Scolopacidae	0.9879804			leasan	0.99999857	leasan	0.999998569	2023-07-20	10:36:05 PM	Y
1026.8	1028.4	0	11025	Charadriiformes	0.97829425	Scolopacidae	0.9943961			leasan	0.9999995	leasan	0.999999523	2023-07-20	10:36:09 PM	Y
477.6	479	0	11025	Charadriiformes	0.98134816	Scolopacidae	0.99560237			sposan	0.9983511	sposan	0.998351097	2023-07-20	9:27:00 PM	Y
2461.2	2463.2	0	11025	Charadriiformes	0.9808787	Scolopacidae	0.99525297			sposan	0.9994535	sposan	0.999453485	2023-07-20	10:00:03 PM	Y
2465	2467	0	11025	Charadriiformes	0.980839	Scolopacidae	0.9953459			sposan	0.9995278	sposan	0.999527812	2023-07-20	10:00:07 PM	Y
2474.6	2476.2	0	11025	Charadriiformes	0.97642684	Scolopacidae	0.99228656			sposan	0.9974744	sposan	0.997474372	2023-07-20	10:00:17 PM	Y
2479.2	2481.6	0	11025	Charadriiformes	0.98128384	Scolopacidae	0.99561214			sposan	0.99951124	sposan	0.999511242	2023-07-20	10:00:21 PM	Y
2484.4	2486.4	0	11025	Charadriiformes	0.9811396	Scolopacidae	0.995469			sposan	0.99951184	sposan	0.999511838	2023-07-20	10:00:26 PM	Y
2486.6	2489.2	0	11025	Charadriiformes	0.9806608	Scolopacidae	0.9952787			sposan	0.9994849	sposan	0.999484897	2023-07-20	10:00:29 PM	Y
2489.8	2492.2	0	11025	Charadriiformes	0.9812128	Scolopacidae	0.99556965			sposan	0.999527	sposan	0.999526978	2023-07-20	10:00:32 PM	Y
2492.6	2497	0	11025	Charadriiformes	0.9811834	Scolopacidae	0.99545527			sposan	0.9995372	sposan	0.99953723	2023-07-20	10:00:35 PM	Y
2497.2	2501.2	0	11025	Charadriiformes	0.9812785	Scolopacidae	0.9954958			sposan	0.9995409	sposan	0.999540925	2023-07-20	10:00:39 PM	Y
2501.6	2505.4	0	11025	Charadriiformes	0.9813014	Scolopacidae	0.9955918			sposan	0.9995419	sposan	0.999541879	2023-07-20	10:00:44 PM	Y
2505.8	2509.6	0	11025	Charadriiformes	0.9814305	Scolopacidae	0.9956542			sposan	0.99954635	sposan	0.999546349	2023-07-20	10:00:48 PM	Y
2510.4	2513.8	0	11025	Charadriiformes	0.9812553	Scolopacidae	0.9955568			sposan	0.9995413	sposan	0.999541283	2023-07-20	10:00:52 PM	Y
2515.6	2518.6	0	11025	Charadriiformes	0.98131716	Scolopacidae	0.99554247			sposan	0.9995425	sposan	0.999542475	2023-07-20	10:00:58 PM	Y
2521.2	2524.6	0	11025	Charadriiformes	0.97968894	Scolopacidae	0.99498063			sposan	0.99946815	sposan	0.999468148	2023-07-20	10:01:03 PM	Y
2527.2	2528.8	0	11025	Charadriiformes	0.97886306	Scolopacidae	0.9945634			sposan	0.9993672	sposan	0.999367177	2023-07-20	10:01:09 PM	Y
2530.8	2532.4	0	11025	Charadriiformes	0.9785607	Scolopacidae	0.99421084			sposan	0.9989195	sposan	0.998919487	2023-07-20	10:01:13 PM	Y
2577.2	2578.8	0	11025	Charadriiformes	0.9807452	Scolopacidae	0.9951632			sposan	0.9992131	sposan	0.999213099	2023-07-20	10:01:59 PM	Y
2628	2630.2	0	11025	Charadriiformes	0.9813643	Scolopacidae	0.99561465			sposan	0.9995289	sposan	0.999528885	2023-07-20	10:02:50 PM	Y
1068.8	1070.2	0	11025	Passeriformes	0.9516888	Turdidae	0.93254244	THSH	0.9095731	herthr	0.98802394	herthr	0.988023937	2023-07-25	8:31:49 PM	Y
1093	1094.4	0	11025	Passeriformes	0.9674558	Turdidae	0.95348656	THSH	0.9401348	herthr	0.9999894	herthr	0.99998939	2023-07-25	8:32:13 PM	Y
635.6	637.4	0	11025	Passeriformes	0.9721949	Parulidae	0.9558164			canwar	0.99775773	canwar	0.997757733	2023-08-17	12:54:39 AM	Y
637.6	639	0	11025	Passeriformes	0.95663893	Parulidae	0.90030444			canwar	0.9553577	canwar	0.955357671	2023-08-17	1:54:40 AM	Y
3585.4	3586.6	0	11025	Passeriformes	0.970455	Turdidae	0.95775783			amerob	0.9999982	amerob	0.999998212	2023-08-20	6:38:47 AM	Y
2651.4	2653.2	0	11025	Passeriformes	0.9722278	Parulidae	0.9559988			canwar	0.9979079	canwar	0.997907877	2023-08-20	10:21:13 PM	Y
1395.8	1397.2	0	11025	Passeriformes	0.96920824	Parulidae	0.89931816			canwar	0.99072355	canwar	0.99072355	2023-08-20	11:00:18 PM	Y
1506.6	1508	0	11025	Charadriiformes	0.9597781	Scolopacidae	0.9843503			leasan	0.99999225	leasan	0.999992251	2023-08-20	1:04:10 AM	Y
1755.8	1757.2	0	11025	Passeriformes	0.9719554	Parulidae	0.9500028			canwar	0.99657625	canwar	0.99657625	2023-08-21	12:06:18 AM	Y
3329	3330.6	0	11025	Passeriformes	0.97194654	Parulidae	0.9553607			canwar	0.9827435	canwar	0.982743502	2023-08-21	12:32:31 AM	Y
545	546.6	0	11025	Passeriformes	0.9672586	Parulidae	0.94815224			canwar	0.97318643	canwar	0.973186433	2023-08-21	1:46:07 AM	Y
3037.4	3039	0	11025	Passeriformes	0.97221065	Parulidae	0.9558485			canwar	0.99781907	canwar	0.997819066	2023-08-21	2:27:39 AM	Y
1582.8	1584.2	0	11025	Passeriformes	0.97146666	Parulidae	0.95535856			canwar	0.9566747	canwar	0.956674695	2023-08-21	4:03:25 AM	Y
3229	3230.8	0	11025	Passeriformes	0.9721501	Parulidae	0.9555798			canwar	0.9976561	canwar	0.997656107	2023-08-21	4:30:51 AM	Y
260	261.4	0	11025	Passeriformes	0.9681916	Parulidae	0.94419044			wlswar	0.98457193	wlswar	0.984571934	2023-08-21	1:41:22 AM	Y
2593.2	2594.8	0	11025	Charadriiformes	0.9805352	Scolopacidae	0.99517906			greyel	0.99916756	greyel	0.999167562	2023-08-22	1:18:16 AM	Y
1675.4	1676.8	0	11025	Charadriiformes	0.97260576	Scolopacidae	0.9901896			greyel	0.9811519	greyel	0.981151879	2023-08-22	5:02:57 AM	Y
275.6	277.2	0	11025	Charadriiformes	0.981426	Scolopacidae	0.99568105			shbdow	0.9999589	shbdow	0.999958873	2023-08-22	12:39:39 AM	Y
284.6	286.4	0	11025	Charadriiformes	0.98146915	Scolopacidae	0.9957093			shbdow	0.9999583	shbdow	0.999958277	2023-08-22	12:39:48 AM	Y
2333.4	2335	0	11025	Charadriiformes	0.98113406	Scolopacidae	0.99555063			shbdow	0.99995744	shbdow	0.999957442	2023-08-22	1:13:56 AM	Y
2360	2361.8	0	11025	Charadriiformes	0.9813638	Scolopacidae	0.99567527			shbdow	0.9999572	shbdow	0.999957204	2023-08-22	1:14:23 AM	Y
2370.2	2371.8	0	11025	Charadriiformes	0.9813192	Scolopacidae	0.9955996			shbdow	0.99995565	shbdow	0.999955654	2023-08-22	1:14:33 AM	Y
2385.8	2387.4	0	11025	Charadriiformes	0.9396815	Scolopacidae	0.9861215			shbdow	0.9999405	shbdow	0.999940515	2023-08-22	1:14:49 AM	Y

Table 5: 2023 IRRBird1 Nighthawk Results - Harbour Hills Wind Project

Begin Time (s)	End Time (s)	Low Freq (Hz)	High Freq (Hz)	Order	Order Probability	Family	Family Probability	Group	Group Probability	Species	Species Probability	Predicted Category	Probability	Date	Time	Annotation
2529.6	2531.2	0	11025	Charadriiformes	0.98095304	Scolopacidae	0.9955525			shbdow	0.9999577	shbdow	0.999957681	2023-08-22	2:17:12 AM	Y
2574.4	2576	0	11025	Charadriiformes	0.9807232	Scolopacidae	0.9954977			shbdow	0.9999552	shbdow	0.999955177	2023-08-22	2:17:56 AM	Y
2587.4	2592.4	0	11025	Charadriiformes	0.98145294	Scolopacidae	0.99568605			shbdow	0.9999604	shbdow	0.999960423	2023-08-22	2:18:09 AM	Y
2592.4	2597.4	0	11025	Charadriiformes	0.98145294	Scolopacidae	0.99568605			shbdow	0.9999604	shbdow	0.999960423	2023-08-22	2:18:14 AM	Y
2597.4	2602.4	0	11025	Charadriiformes	0.98145294	Scolopacidae	0.99568605			shbdow	0.9999604	shbdow	0.999960423	2023-08-22	2:18:19 AM	Y
2602.4	2605.2	0	11025	Charadriiformes	0.98145294	Scolopacidae	0.99568605			shbdow	0.9999604	shbdow	0.999960423	2023-08-22	2:18:24 AM	Y
2607.8	2609.4	0	11025	Charadriiformes	0.9809933	Scolopacidae	0.99543935			shbdow	0.9999039	shbdow	0.999903917	2023-08-22	2:18:30 AM	Y
2613	2614.6	0	11025	Charadriiformes	0.98092765	Scolopacidae	0.995526			shbdow	0.99960715	shbdow	0.999607146	2023-08-22	2:18:35 AM	Y
2902.4	2904.2	0	11025	Passeriformes	0.9720915	Turdidae	0.9586197			amerob	0.9999994	amerob	0.999999404	2023-08-23	6:22:24 AM	Y
2923.8	2925.6	0	11025	Passeriformes	0.9721409	Turdidae	0.9598257			amerob	0.9999999	amerob	0.999999881	2023-08-23	6:22:46 AM	Y
2969.4	2971.2	0	11025	Passeriformes	0.97223693	Turdidae	0.95985276			amerob	0.9999999	amerob	0.999999881	2023-08-23	6:23:31 AM	Y
3055.4	3057	0	11025	Passeriformes	0.97221476	Turdidae	0.959764			amerob	0.9999999	amerob	0.999999881	2023-08-23	6:24:57 AM	Y
3080.8	3082.2	0	11025	Passeriformes	0.9719167	Turdidae	0.9593551			amerob	0.99999976	amerob	0.999999762	2023-08-23	6:25:23 AM	Y
898	899.8	0	11025	Passeriformes	0.9701597	Parulidae	0.95354426			canwar	0.9901951	canwar	0.990195096	2023-08-23	3:49:00 AM	Y
914.8	916.2	0	11025	Passeriformes	0.97039133	Parulidae	0.94283134			canwar	0.98784095	canwar	0.98784095	2023-08-23	3:49:17 AM	Y
2716	2717.4	0	11025	Passeriformes	0.97214735	Parulidae	0.9550294			canwar	0.99672157	canwar	0.996721566	2023-08-23	4:19:18 AM	Y
446.4	448.2	0	11025	Passeriformes	0.9712176	Parulidae	0.94249153			canwar	0.995465	canwar	0.995464981	2023-08-23	10:39:28 PM	Y
1927.6	1929	0	11025	Passeriformes	0.9718684	Parulidae	0.9556092			canwar	0.9833877	canwar	0.983387709	2023-08-23	11:04:10 PM	Y
770	771.4	0	11025	Passeriformes	0.9636705	Turdidae	0.93408227	THSH	0.90299726	herthr	0.9999981	herthr	0.999998093	2023-08-23	5:46:52 AM	Y
3238.6	3240.2	0	11025	Charadriiformes	0.9814663	Scolopacidae	0.9957218			solсан	0.975911	solсан	0.975911021	2023-08-23	4:28:01 AM	Y
2209.8	2211.6	0	11025	Passeriformes	0.9721258	Parulidae	0.95625585			wlswar	0.99570113	wlswar	0.995701134	2023-08-23	3:10:52 AM	Y
2646	2647.4	0	11025	Passeriformes	0.95279473	Parulidae	0.8713237			wlswar	0.84168464	wlswar	0.841684639	2023-08-23	11:16:08 PM	Y
3211.8	3213	0	11025	Passeriformes	0.9721314	Turdidae	0.95842874			amerob	0.99999905	amerob	0.999999046	2023-08-24	8:23:32 PM	Y
2415.4	2417	0	11025	Passeriformes	0.97223085	Parulidae	0.9555943			bawwar	0.99999964	bawwar	0.999999642	2023-08-24	9:10:17 PM	Y
2573	2574.8	0	11025	Passeriformes	0.97211367	Parulidae	0.9532559			bawwar	0.9999989	bawwar	0.999998927	2023-08-24	9:12:55 PM	Y
2622.6	2624	0	11025	Passeriformes	0.97215635	Parulidae	0.95596564	BZWA	0.98222613	comyel	0.9556254	comyel	0.955625415	2023-08-24	11:13:45 PM	Y
3507.4	3509.2	0	11025	Passeriformes	0.9722297	Parulidae	0.9558432	MWAR	0.99905103	mouwar	0.986231	mouwar	0.986231029	2023-08-24	9:28:29 PM	Y
341.4	342.8	0	11025	Passeriformes	0.9658784	Parulidae	0.92929095	ZEEP	0.932264	norwat	0.99974376	norwat	0.99974376	2023-08-24	10:35:43 PM	Y
793	794.4	0	11025	Passeriformes	0.97218704	Parulidae	0.9517774	ZEEP	0.94044095	norwat	0.99994147	norwat	0.999941468	2023-08-24	10:43:15 PM	Y
2909.2	2910.6	0	11025	Passeriformes	0.97210115	Parulidae	0.9490195	ZEEP	0.95855796	norwat	0.99999917	norwat	0.999999166	2023-08-24	11:18:31 PM	Y
59.4	61	0	11025	Passeriformes	0.97190666	Parulidae	0.9542772	SBUF	0.9276771	ovenbi1	0.93356144	ovenbi1	0.933561444	2023-08-24	7:30:59 PM	Y
599.8	601.2	0	11025	Passeriformes	0.97124743	Parulidae	0.9507134	SBUF	0.90983206	ovenbi1	0.9753236	ovenbi1	0.975323617	2023-08-24	7:40:00 PM	Y
2613.4	2615.2	0	11025	Passeriformes	0.97214895	Parulidae	0.95605433	SBUF	0.9371183	ovenbi1	0.9712506	ovenbi1	0.971250594	2023-08-24	11:13:35 PM	Y
3327.4	3329	0	11025	Passeriformes	0.965372	Parulidae	0.927976	SBUF	0.8943405	palwar	0.9999938	palwar	0.999993801	2023-08-24	9:25:29 PM	Y
621.2	622.8	0	11025	Passeriformes	0.970923	Cardinalidae	0.99245375	GROS	0.998216	robgro	0.999302	robgro	0.99930203	2023-08-24	4:42:23 AM	Y
684.4	686	0	11025	Passeriformes	0.9590453	Cardinalidae	0.9690016	GROS	0.99463034	robgro	0.9970283	robgro	0.997028291	2023-08-24	4:43:26 AM	Y
3169.6	3171	0	11025	Passeriformes	0.96341413	Passerellidae	0.9911266	DESP	0.983585	savspa	0.98423356	savspa	0.984233558	2023-08-24	11:22:52 PM	Y
1238.4	1240	0	11025	Passeriformes	0.9692617	Parulidae	0.9373425	ZEEP	0.9522972	norwat	0.99991584	norwat	0.999915838	2023-08-25	12:50:41 AM	Y
1385.8	1387.4	0	11025	Passeriformes	0.97163206	Parulidae	0.95277786	ZEEP	0.95776993	norwat	0.99993134	norwat	0.999931335	2023-08-25	12:53:09 AM	Y
1496.4	1498	0	11025	Passeriformes	0.9713505	Parulidae	0.94896716	ZEEP	0.9390169	norwat	0.99997675	norwat	0.999976754	2023-08-25	12:54:59 AM	Y
1687.8	1689.6	0	11025	Passeriformes	0.97221935	Parulidae	0.95571935	ZEEP	0.9626051	norwat	0.99999976	norwat	0.999999762	2023-08-25	12:58:11 AM	Y
1755.8	1757.6	0	11025	Passeriformes	0.9721752	Parulidae	0.95466024	ZEEP	0.9527376	norwat	0.9999982	norwat	0.999998212	2023-08-25	12:59:19 AM	Y
2210.8	2212.6	0	11025	Passeriformes	0.9641338	Parulidae	0.93065906	ZEEP	0.9435033	norwat	0.998628	norwat	0.99862802	2023-08-25	1:06:54 AM	Y
2722.2	2724	0	11025	Passeriformes	0.97223604	Parulidae	0.9557063	ZEEP	0.9627344	norwat	0.9999999	norwat	0.999999881	2023-08-25	1:15:25 AM	Y
531	532.8	0	11025	Passeriformes	0.9720053	Parulidae	0.9559383	SBUF	0.9363222	ovenbi1	0.98074347	ovenbi1	0.980743468	2023-08-25	12:38:54 AM	Y
132	133.8	0	11025	Passeriformes	0.9712427	Parulidae	0.95454454	SBUF	0.8860696	ovenbi1	0.93054396	ovenbi1	0.930543959	2023-08-25	6:32:15 AM	Y
742.6	744.4	0	11025	Passeriformes	0.96827894	Parulidae	0.9502167			wlswar	0.989384	wlswar	0.989383996	2023-08-25	12:42:26 AM	Y
3428.6	3430.2	0	11025	Passeriformes	0.9721934	Parulidae	0.95602196			canwar	0.99646133	canwar	0.996461332	2023-08-27	10:22:11 PM	Y
2340.4	2342	0	11025	Passeriformes	0.9716011	Parulidae	0.9541289			canwar	0.9968867	canwar	0.996886671	2023-08-27	11:04:02 PM	Y
106.6	108.4	0	11025	Passeriformes	0.97182727	Parulidae	0.9544053	BZWA	0.979806	chswar	0.96559274	chswar	0.965592742	2023-08-27	9:26:49 PM	Y
3347	3348.8	0	11025	Passeriformes	0.9713684	Parulidae	0.95313793	BZWA	0.9779198	chswar	0.965488	chswar	0.965488017	2023-08-27	10:20:49 PM	Y
3371.2	3373	0	11025	Passeriformes	0.97214925	Parulidae	0.9555149	BZWA	0.98276997	chswar	0.9686095	chswar	0.968609512	2023-08-27	10:21:13 PM	Y
231.8	233.4	0	11025	Passeriformes	0.9539074	Parulidae	0.93112123	BZWA	0.9651178	chswar	0.96065164	chswar	0.960651636	2023-08-27	10:28:54 PM	Y
816.2	817.8	0	11025	Passeriformes	0.9722143	Parulidae	0.95629704	BZWA	0.982311	comyel	0.9999995	comyel	0.999999523	2023-08-27	10:38:38 PM	Y
1993.8	1995.6	0	11025	Passeriformes	0.9666109	Parulidae	0.94325304	BZWA	0.9687836	comyel	0.99999404	comyel	0.99999404	2023-08-27	10:58:16 PM	Y
584.2	585.6	0	11025	Passeriformes	0.97193897	Parulidae	0.95424855	BZWA	0.9693634	comyel	0.9999995	comyel	0.999999523	2023-08-27	11:34:46 PM	Y
1167.2	1169	0	11025	Passeriformes	0.9722024	Parulidae	0.9562334	BZWA	0.9829343	comyel	0.9999999	comyel	0.999999881	2023-08-27	11:44:29 PM	Y
1879.4	1881	0	11025	Passeriformes	0.9720766	Parulidae	0.95538217	MWAR	0.99904376	mouwar	0.99593014	mouwar	0.995930135	2023-08-27	9:56:21 PM	Y
2154.4	2156.2	0	11025	Passeriformes	0.972219	Parulidae	0.9561317	MWAR	0.9990891	mouwar	0.99552	mouwar	0.995519996	2023-08-27	10:00:56 PM	Y
206.4	208	0	11025	Passeriformes	0.96958536	Parulidae	0.9212219	DEWA	0.99986887	norpar	0.99862504	norpar	0.99862504	2023-08-27	11:28:28 PM	Y
1773.4	1775	0	11025	Passeriformes	0.9721471	Parulidae	0.95312744	ZEEP	0.95650816	norwat	0.99999964	norwat	0.999999642	2023-08-27	9:54:35 PM	Y
2062.8	2064.6	0	11025	Passeriformes	0.97223413	Parulidae	0.95588446	ZEEP	0.9625797	norwat	0.99999964	norwat	0.999999642	2023-08-27	9:59:25 PM	Y
2099.6	2101.2	0	11025	Passeriformes	0.97217685	Parulidae	0.95368713	ZEEP	0.956482	norwat	0.99999964	norwat	0.999999642	2023-08-27	10:00:02 PM	Y

Table 5: 2023 IRRBird1 Nighthawk Results - Harbour Hills Wind Project

Begin Time (s)	End Time (s)	Low Freq (Hz)	High Freq (Hz)	Order	Order Probability	Family	Family Probability	Group	Group Probability	Species	Species Probability	Predicted Category	Probability	Date	Time	Annotation
2222.6	2224.4	0	11025	Passeriformes	0.9722252	Parulidae	0.9551194	ZEEP	0.9584597	norwat	0.99999464	norwat	0.999994636	2023-08-27	10:02:05 PM	Y
2624.4	2625.8	0	11025	Passeriformes	0.96961796	Parulidae	0.93945795	ZEEP	0.8798268	norwat	0.9991295	norwat	0.999129474	2023-08-27	10:08:46 PM	Y
1759.8	1761.4	0	11025	Passeriformes	0.9718364	Parulidae	0.9548246	SBUF	0.92344207	ovenbi1	0.9564693	ovenbi1	0.956469297	2023-08-27	9:54:22 PM	Y
2050	2051.6	0	11025	Passeriformes	0.9720543	Parulidae	0.9560235	SBUF	0.9120354	ovenbi1	0.96586186	ovenbi1	0.965861857	2023-08-27	9:59:12 PM	Y
3249.6	3251.4	0	11025	Passeriformes	0.97222286	Parulidae	0.95636815	SBUF	0.9416797	ovenbi1	0.98524725	ovenbi1	0.985247254	2023-08-27	10:19:12 PM	Y
1290.6	1292.2	0	11025	Passeriformes	0.97174174	Parulidae	0.95540905	SBUF	0.91629654	ovenbi1	0.9731348	ovenbi1	0.973134816	2023-08-27	10:46:33 PM	Y
1316	1317.8	0	11025	Passeriformes	0.9717135	Parulidae	0.95436317	SBUF	0.9224863	ovenbi1	0.969841	ovenbi1	0.969841003	2023-08-27	10:46:58 PM	Y
1395.4	1397.2	0	11025	Passeriformes	0.9719777	Parulidae	0.9552637	SBUF	0.92926323	ovenbi1	0.9683999	ovenbi1	0.968399882	2023-08-27	10:48:17 PM	Y
2473.4	2474.8	0	11025	Passeriformes	0.97128403	Cardinalidae	0.843472	GROS	0.9452892	robgro	0.9590466	robgro	0.959046602	2023-08-27	11:06:15 PM	Y
3324.6	3326.2	0	11025	Passeriformes	0.97220606	Cardinalidae	0.9922713	GROS	0.99796224	robgro	0.99917895	robgro	0.999178946	2023-08-27	11:20:27 PM	Y
1668.8	1670.4	0	11025	Passeriformes	0.9698108	Turdidae	0.95200896	THSH	0.9341404	veery	0.9667145	veery	0.966714501	2023-08-27	11:52:51 PM	Y
1710	1711.6	0	11025	Passeriformes	0.9720437	Turdidae	0.9580829	THSH	0.94417554	veery	0.9892631	veery	0.989263117	2023-08-27	11:53:32 PM	Y
1828	1829.2	0	11025	Passeriformes	0.9716619	Turdidae	0.9554706	THSH	0.9350758	veery	0.9086898	veery	0.908689797	2023-08-27	11:55:30 PM	Y
1571.6	1573.4	0	11025	Passeriformes	0.9721733	Parulidae	0.95613027	ZEEP	0.9611768	camwar	0.9999999	camwar	0.999999881	2023-08-28	3:51:14 AM	Y
2954	2955.8	0	11025	Passeriformes	0.9721829	Parulidae	0.9554134			canwar	0.99772626	canwar	0.997726262	2023-08-28	3:14:16 AM	Y
1651.8	1653.6	0	11025	Passeriformes	0.97213644	Parulidae	0.95626163			canwar	0.99493945	canwar	0.994939446	2023-08-28	3:52:34 AM	Y
2514.8	2516	0	11025	Passeriformes	0.96079886	Parulidae	0.9343965	BZWA	0.97153735	comyel	0.9984825	comyel	0.998482525	2023-08-28	12:06:57 AM	Y
3078	3079.2	0	11025	Passeriformes	0.97137827	Parulidae	0.95361835	BZWA	0.98204535	comyel	0.9295837	comyel	0.929583728	2023-08-28	3:16:20 AM	Y
1318.2	1320	0	11025	Passeriformes	0.97202706	Parulidae	0.9548356	BZWA	0.9827623	comyel	0.9999999	comyel	0.999999881	2023-08-28	3:47:00 AM	Y
415.4	416.8	0	11025	Passeriformes	0.9721925	Parulidae	0.95598894	BZWA	0.98256737	comyel	0.999995	comyel	0.999994993	2023-08-28	10:29:57 PM	Y
1585.2	1586.6	0	11025	Passeriformes	0.97191757	Parulidae	0.9548979	BZWA	0.98082465	comyel	0.9999982	comyel	0.999998212	2023-08-28	10:49:27 PM	Y
2423.4	2425.2	0	11025	Passeriformes	0.97216773	Parulidae	0.95442724	MWAR	0.99900275	mouwar	0.9889515	mouwar	0.988951504	2023-08-28	12:05:25 AM	Y
3192.2	3193.8	0	11025	Passeriformes	0.97083473	Parulidae	0.9514368	MWAR	0.99844676	mouwar	0.955802	mouwar	0.955802023	2023-08-28	2:18:14 AM	Y
601.8	603.4	0	11025	Passeriformes	0.9720747	Parulidae	0.9544473	MWAR	0.9989017	mouwar	0.93225336	mouwar	0.932253361	2023-08-28	2:35:04 AM	Y
481.2	483	0	11025	Passeriformes	0.97222835	Parulidae	0.9562881	MWAR	0.99915624	mouwar	0.99651164	mouwar	0.996511638	2023-08-28	5:33:03 AM	Y
371	372.6	0	11025	Passeriformes	0.97222406	Parulidae	0.9559988	MWAR	0.99913836	mouwar	0.9964227	mouwar	0.996422708	2023-08-28	10:29:13 PM	Y
2879.2	2880.4	0	11025	Passeriformes	0.9706946	Parulidae	0.9528309	MWAR	0.9967303	mouwar	0.9378255	mouwar	0.937825501	2023-08-28	11:11:01 PM	Y
2890.4	2892.2	0	11025	Passeriformes	0.972072	Parulidae	0.9549154	MWAR	0.99896383	mouwar	0.9952708	mouwar	0.995270789	2023-08-28	11:11:12 PM	Y
2768.8	2770.6	0	11025	Passeriformes	0.97217655	Parulidae	0.9492056	ZEEP	0.9613374	norwat	0.9999987	norwat	0.999998689	2023-08-28	3:11:11 AM	Y
2879.6	2881.4	0	11025	Passeriformes	0.9722134	Parulidae	0.95476997	ZEEP	0.9625066	norwat	0.9999999	norwat	0.999999881	2023-08-28	3:13:02 AM	Y
204.4	206	0	11025	Passeriformes	0.9722259	Parulidae	0.95539933	ZEEP	0.9582261	norwat	0.99998283	norwat	0.999982834	2023-08-28	3:28:26 AM	Y
978.6	980.2	0	11025	Passeriformes	0.97183245	Parulidae	0.95143616	ZEEP	0.95809406	norwat	0.9999987	norwat	0.999998689	2023-08-28	3:41:21 AM	Y
2196.8	2198.6	0	11025	Passeriformes	0.9722206	Parulidae	0.9556312	SBUF	0.9363849	ovenbi1	0.98313993	ovenbi1	0.983139932	2023-08-28	12:01:39 AM	Y
3264.2	3265.8	0	11025	Passeriformes	0.97223514	Parulidae	0.95639014	SBUF	0.9413595	ovenbi1	0.9827932	ovenbi1	0.982793212	2023-08-28	12:19:26 AM	Y
818.8	820.6	0	11025	Passeriformes	0.9721143	Passerellidae	0.9954194	DESP	0.9917936	savspa	0.99836427	savspa	0.99836427	2023-08-28	12:38:42 AM	Y
914.4	915.8	0	11025	Passeriformes	0.96705896	Turdidae	0.93804383	THSH	0.8974686	veery	0.97986746	veery	0.979867458	2023-08-28	12:40:17 AM	Y
1039	1040.4	0	11025	Passeriformes	0.9715504	Turdidae	0.95665497	THSH	0.941413	veery	0.98076564	veery	0.980765641	2023-08-28	12:42:22 AM	Y
1849.4	1851.2	0	11025	Passeriformes	0.97223425	Parulidae	0.9562771			bawwar	0.9999994	bawwar	0.999999404	2023-08-29	1:53:51 AM	Y
2292	2293.8	0	11025	Passeriformes	0.9721273	Parulidae	0.956135			bawwar	0.99928856	bawwar	0.999288559	2023-08-29	4:01:14 AM	Y
2318	2319.8	0	11025	Passeriformes	0.9720557	Parulidae	0.95584613			bawwar	0.9999825	bawwar	0.999982476	2023-08-29	4:01:40 AM	Y
1761.8	1763.4	0	11025	Passeriformes	0.9722188	Parulidae	0.9563667			bawwar	0.9999987	bawwar	0.999998689	2023-08-29	9:50:24 PM	Y
2147.2	2148.8	0	11025	Passeriformes	0.9719925	Parulidae	0.95608526			bawwar	0.9999448	bawwar	0.999944806	2023-08-29	9:56:49 PM	Y
2945.8	2947.4	0	11025	Passeriformes	0.97223413	Parulidae	0.95647544			bawwar	0.9999999	bawwar	0.999999881	2023-08-29	10:10:08 PM	Y
1025.8	1027.2	0	11025	Passeriformes	0.9720702	Parulidae	0.9530722	BZWA	0.9740044	chswar	0.96011496	chswar	0.960114956	2023-08-29	12:40:10 AM	Y
1990.2	1991.6	0	11025	Passeriformes	0.9699452	Parulidae	0.95180506	BZWA	0.9643017	chswar	0.9560441	chswar	0.956044078	2023-08-29	9:54:12 PM	Y
15.8	17.4	0	11025	Passeriformes	0.9717881	Parulidae	0.95473486	BZWA	0.9814788	comyel	0.9994997	comyel	0.999499679	2023-08-29	1:23:18 AM	Y
34.8	36.2	0	11025	Passeriformes	0.9700519	Parulidae	0.9490561	BZWA	0.98088753	comyel	0.9999989	comyel	0.999998927	2023-08-29	1:23:37 AM	Y
343.8	345	0	11025	Passeriformes	0.9718946	Parulidae	0.95463765	BZWA	0.9749815	comyel	0.99999917	comyel	0.999999166	2023-08-29	1:28:46 AM	Y
1371.4	1373.2	0	11025	Passeriformes	0.9718569	Parulidae	0.95462775	BZWA	0.9823072	comyel	0.99999917	comyel	0.999999166	2023-08-29	1:45:53 AM	Y
2282.2	2283.6	0	11025	Passeriformes	0.97137284	Parulidae	0.93218833	BZWA	0.9729177	comyel	0.99999833	comyel	0.999998331	2023-08-29	2:01:04 AM	Y
477.8	479.4	0	11025	Passeriformes	0.9719997	Parulidae	0.9548079	BZWA	0.98059225	comyel	0.996852	comyel	0.996851981	2023-08-29	3:31:00 AM	Y
1731.6	1733.2	0	11025	Passeriformes	0.9718959	Parulidae	0.9552339	BZWA	0.9806702	comyel	0.9997563	comyel	0.999756277	2023-08-29	3:51:54 AM	Y
2213.4	2214.6	0	11025	Passeriformes	0.9587959	Turdidae	0.9310407	THSH	0.88881636	herthr	0.9995912	herthr	0.999591172	2023-08-29	8:57:55 PM	Y
2820	2821.8	0	11025	Passeriformes	0.97187865	Parulidae	0.9520665	DEWA	0.99997604	norpar	0.9998535	norpar	0.999853492	2023-08-29	1:10:04 AM	Y
273	274.8	0	11025	Passeriformes	0.972209	Parulidae	0.9550752	ZEEP	0.96234995	norwat	0.9999988	norwat	0.999998808	2023-08-29	12:27:37 AM	Y
289.8	291.6	0	11025	Passeriformes	0.97189516	Parulidae	0.9357534	ZEEP	0.9441401	norwat	0.9999182	norwat	0.999918222	2023-08-29	12:27:54 AM	Y
1993.2	1994.6	0	11025	Passeriformes	0.97206205	Parulidae	0.95121175	ZEEP	0.9382628	norwat	0.9992324	norwat	0.999232411	2023-08-29	9:54:15 PM	Y
462.2	463.8	0	11025	Passeriformes	0.9711068	Parulidae	0.95449185	SBUF	0.9157117	ovenbi1	0.9751081	ovenbi1	0.975108087	2023-08-29	3:30:44 AM	Y
468	469.8	0	11025	Passeriformes	0.9716551	Parulidae	0.9552002	SBUF	0.93904835	ovenbi1	0.9829516	ovenbi1	0.982951581	2023-08-29	3:30:50 AM	Y
481.8	483.2	0	11025	Passeriformes	0.9707447	Parulidae	0.9447132	SBUF	0.92176694	ovenbi1	0.95183223	ovenbi1	0.951832235	2023-08-29	3:31:04 AM	Y
382.8	384.4	0	11025	Passeriformes	0.9718739	Turdidae	0.95882756	THSH	0.94461244	veery	0.9459433	veery	0.945943296	2023-08-29	9:27:25 PM	Y
435.2	436.8	0	11025	Passeriformes	0.97217673	Parulidae	0.9563243			bawwar	0.99999976	bawwar	0.999999762	2023-08-31	6:27:18 AM	Y
622	623.6	0	11025	Passeriformes	0.97221	Parulidae	0.9564449	BZWA	0.97849214	chswar	0.96067	chswar	0.960669994	2023-08-31	10:28:24 PM	Y

Table 5: 2023 IRRBird1 Nighthawk Results - Harbour Hills Wind Project

Begin Time (s)	End Time (s)	Low Freq (Hz)	High Freq (Hz)	Order	Order Probability	Family	Family Probability	Group	Group Probability	Species	Species Probability	Predicted Category	Probability	Date	Time	Annotation
3021.6	3023.2	0	11025	Passeriformes	0.9721487	Parulidae	0.9558212	BZWA	0.9817594	chswar	0.9689164	chswar	0.968916416	2023-08-31	11:08:24 PM	Y
344.4	345.8	0	11025	Passeriformes	0.9408728	Parulidae	0.8649322	BZWA	0.97700197	chswar	0.9555129	chswar	0.955512881	2023-08-31	11:23:46 PM	Y
357.2	358.6	0	11025	Passeriformes	0.91551334	Parulidae	0.84759784	BZWA	0.9723622	chswar	0.951672	chswar	0.951672018	2023-08-31	11:23:59 PM	Y
1089.2	1090.8	0	11025	Passeriformes	0.97151	Parulidae	0.9539971	BZWA	0.97987145	chswar	0.9636217	chswar	0.963621676	2023-08-31	11:36:11 PM	Y
1454.4	1456	0	11025	Passeriformes	0.9693532	Parulidae	0.94991595	BZWA	0.9750813	chswar	0.96547425	chswar	0.965474248	2023-08-31	11:42:16 PM	Y
1656	1657.6	0	11025	Passeriformes	0.97218895	Parulidae	0.9560975	BZWA	0.9822558	chswar	0.9684027	chswar	0.968402684	2023-08-31	11:45:38 PM	Y
1689.2	1690.8	0	11025	Passeriformes	0.97220886	Parulidae	0.9560754	BZWA	0.9828752	chswar	0.9676802	chswar	0.967680216	2023-08-31	11:46:11 PM	Y
332	333.8	0	11025	Passeriformes	0.972204	Parulidae	0.95626235	BZWA	0.98152554	comyel	0.9999956	comyel	0.999995589	2023-08-31	9:23:34 PM	Y
2708	2709.8	0	11025	Passeriformes	0.9721228	Parulidae	0.9556731	BZWA	0.980667	comyel	0.9999428	comyel	0.99994278	2023-08-31	10:03:10 PM	Y
1390.2	1391.4	0	11025	Passeriformes	0.9721799	Parulidae	0.95613956	BZWA	0.9813804	comyel	0.9999925	comyel	0.99999249	2023-08-31	10:41:12 PM	Y
993.8	995.4	0	11025	Passeriformes	0.9722115	Parulidae	0.9560855	MWAR	0.99904233	mouwar	0.9955837	mouwar	0.995583713	2023-08-31	9:34:36 PM	Y
667.4	669.2	0	11025	Passeriformes	0.9722358	Parulidae	0.9563023	MWAR	0.999166	mouwar	0.99717927	mouwar	0.99717927	2023-08-31	10:29:09 PM	Y
1518.4	1519.8	0	11025	Passeriformes	0.9719731	Parulidae	0.9535001	MWAR	0.99667054	mouwar	0.91142213	mouwar	0.911422133	2023-08-31	10:43:20 PM	Y
182.6	184.2	0	11025	Passeriformes	0.9722144	Parulidae	0.9558423	MWAR	0.9989735	mouwar	0.99240136	mouwar	0.992401361	2023-08-31	11:21:05 PM	Y
940.8	942.6	0	11025	Passeriformes	0.97216856	Parulidae	0.9555794	MWAR	0.9987871	mouwar	0.98683226	mouwar	0.986832261	2023-08-31	11:33:43 PM	Y
1657	1658.8	0	11025	Passeriformes	0.97150606	Parulidae	0.9501001	DEWA	0.99998844	norpar	0.9999496	norpar	0.999949574	2023-08-31	10:45:39 PM	Y
3284.6	3286.4	0	11025	Passeriformes	0.97197735	Parulidae	0.9519638	DEWA	0.9999901	norpar	0.9999641	norpar	0.999964118	2023-08-31	11:12:47 PM	Y
1841.4	1843.2	0	11025	Passeriformes	0.97188675	Parulidae	0.9495974	DEWA	0.99998677	norpar	0.9999051	norpar	0.999905109	2023-08-31	11:48:43 PM	Y
1390.4	1392.2	0	11025	Passeriformes	0.97207737	Turdidae	0.95847285	THSH	0.94454753	veery	0.9880009	veery	0.988000929	2023-08-31	4:43:12 AM	Y
2039.6	2041	0	11025	Passeriformes	0.9721823	Parulidae	0.9556165			canwar	0.9943929	canwar	0.994392872	2023-09-01	3:52:02 AM	Y
1490.2	1492	0	11025	Passeriformes	0.97184145	Parulidae	0.9552118			canwar	0.9940355	canwar	0.994035482	2023-09-01	10:40:52 PM	Y
2442.2	2443.6	0	11025	Passeriformes	0.8906192	Parulidae	0.8537704	BZWA	0.96224076	chswar	0.8960491	chswar	0.896049082	2023-09-01	1:58:44 AM	Y
386.6	388.4	0	11025	Passeriformes	0.97194415	Parulidae	0.9548368	BZWA	0.9808482	chswar	0.9646065	chswar	0.964606524	2023-09-01	2:24:29 AM	Y
1282.2	1283.8	0	11025	Passeriformes	0.91688406	Parulidae	0.82410955	BZWA	0.87053466	chswar	0.82883686	chswar	0.828836858	2023-09-01	4:39:24 AM	Y
15.8	17.4	0	11025	Passeriformes	0.97219795	Parulidae	0.95596707	BZWA	0.9699791	chswar	0.9496366	chswar	0.949636579	2023-09-01	5:18:18 AM	Y
1402.2	1403.6	0	11025	Passeriformes	0.96913326	Parulidae	0.9486169	BZWA	0.9469961	chswar	0.96127737	chswar	0.961277366	2023-09-01	5:41:24 AM	Y
2078.4	2079.8	0	11025	Passeriformes	0.96513623	Parulidae	0.94540364	BZWA	0.85593265	chswar	0.89313465	chswar	0.893134654	2023-09-01	5:52:40 AM	Y
2375	2376.4	0	11025	Passeriformes	0.9720181	Parulidae	0.955365	BZWA	0.98176897	comyel	0.9795857	comyel	0.979585707	2023-09-01	12:57:38 AM	Y
2387	2388.2	0	11025	Passeriformes	0.9721123	Parulidae	0.9554287	BZWA	0.9822083	comyel	0.9999933	comyel	0.999993324	2023-09-01	12:57:50 AM	Y
16.4	17.6	0	11025	Passeriformes	0.97106713	Parulidae	0.9535336	BZWA	0.9741426	comyel	0.9999943	comyel	0.999994278	2023-09-01	1:18:18 AM	Y
3287	3288.8	0	11025	Passeriformes	0.9710317	Parulidae	0.9512646	BZWA	0.9668668	comyel	0.9999951	comyel	0.999995112	2023-09-01	2:12:49 AM	Y
1277.4	1279.2	0	11025	Passeriformes	0.9722282	Parulidae	0.9562897	BZWA	0.98253536	comyel	0.9999999	comyel	0.999999881	2023-09-01	2:39:19 AM	Y
308.8	310.6	0	11025	Passeriformes	0.97220606	Parulidae	0.9561975	BZWA	0.9830563	comyel	0.9999999	comyel	0.999999881	2023-09-01	2:23:11 AM	Y
379.4	381	0	11025	Passeriformes	0.9720804	Parulidae	0.9557297	BZWA	0.9795039	comyel	0.9999927	comyel	0.999992728	2023-09-01	3:24:21 AM	Y
389.6	391	0	11025	Passeriformes	0.9666082	Parulidae	0.9431434	BZWA	0.9323229	comyel	0.999286	comyel	0.999285996	2023-09-01	3:24:32 AM	Y
406.8	408.4	0	11025	Passeriformes	0.9721943	Parulidae	0.9561393	BZWA	0.98291206	comyel	0.9999999	comyel	0.999999881	2023-09-01	3:24:49 AM	Y
1027.8	1029.6	0	11025	Passeriformes	0.9708038	Parulidae	0.94989336	BZWA	0.97899014	comyel	0.9999957	comyel	0.999995708	2023-09-01	3:35:10 AM	Y
1836.4	1838	0	11025	Passeriformes	0.9718465	Parulidae	0.9536911	BZWA	0.9369181	comyel	0.9888073	comyel	0.988807321	2023-09-01	3:48:38 AM	Y
397.2	398.8	0	11025	Passeriformes	0.97121465	Parulidae	0.95113623	MWAR	0.99870515	mouwar	0.9905562	mouwar	0.99055618	2023-09-01	12:24:40 AM	Y
3143	3144.2	0	11025	Passeriformes	0.9719935	Parulidae	0.9519684	MWAR	0.99872714	mouwar	0.9556472	mouwar	0.955647171	2023-09-01	1:10:26 AM	Y
3132.8	3134.4	0	11025	Passeriformes	0.97213405	Parulidae	0.954243	MWAR	0.99912745	mouwar	0.9971419	mouwar	0.997141898	2023-09-01	2:10:15 AM	Y
3592.2	3593.6	0	11025	Passeriformes	0.9719739	Parulidae	0.95225614	MWAR	0.99903095	mouwar	0.99146724	mouwar	0.991467237	2023-09-01	3:17:54 AM	Y
2299.2	2301	0	11025	Passeriformes	0.97159743	Parulidae	0.95302194	MWAR	0.9984151	mouwar	0.9502987	mouwar	0.950298727	2023-09-01	4:56:21 AM	Y
2810.2	2811.4	0	11025	Passeriformes	0.9715983	Parulidae	0.9542948	MWAR	0.9981342	mouwar	0.9183972	mouwar	0.918397188	2023-09-01	5:04:52 AM	Y
1677.6	1679.2	0	11025	Passeriformes	0.9721657	Parulidae	0.95574594	MWAR	0.9988335	mouwar	0.9934797	mouwar	0.993479729	2023-09-01	5:46:00 AM	Y
246	247.8	0	11025	Passeriformes	0.97202253	Parulidae	0.9545365	MWAR	0.9989489	mouwar	0.99335796	mouwar	0.993357956	2023-09-01	6:22:10 AM	Y
3114.2	3115.6	0	11025	Passeriformes	0.9650543	Parulidae	0.93825567	MWAR	0.9971048	mouwar	0.9029499	mouwar	0.902949929	2023-09-01	9:07:56 PM	Y
2499.6	2501.2	0	11025	Passeriformes	0.9667575	Parulidae	0.9393758	SBUF	0.86618954	palwar	0.9999957	palwar	0.999995708	2023-09-01	10:57:42 PM	Y
845.6	847.4	0	11025	Passeriformes	0.9721429	Passerellidae	0.9955368	DESP	0.9918351	savspa	0.99345666	savspa	0.993456662	2023-09-01	12:32:09 AM	Y
227	228.8	0	11025	Passeriformes	0.971006	Passerellidae	0.9950595	DESP	0.99113125	savspa	0.9978242	savspa	0.997824192	2023-09-01	4:21:49 AM	Y
2475	2476.8	0	11025	Passeriformes	0.97216684	Passerellidae	0.99544805	DESP	0.99154824	savspa	0.997879	savspa	0.997879028	2023-09-01	4:59:17 AM	Y
2148.6	2150.4	0	11025	Passeriformes	0.9707215	Passerellidae	0.98571104	DESP	0.9264774	savspa	0.9506512	savspa	0.950651228	2023-09-01	5:53:51 AM	Y
2153.4	2155.2	0	11025	Passeriformes	0.9721805	Passerellidae	0.99555176	DESP	0.9918618	savspa	0.99845874	savspa	0.998458743	2023-09-01	5:53:55 AM	Y
2158	2159.8	0	11025	Passeriformes	0.9718346	Passerellidae	0.9953862	DESP	0.99160165	savspa	0.9981982	savspa	0.998198211	2023-09-01	5:54:00 AM	Y
2219.8	2221.6	0	11025	Passeriformes	0.9720282	Passerellidae	0.9949591	DESP	0.99084693	savspa	0.9979194	savspa	0.997919381	2023-09-01	5:55:02 AM	Y
2285.6	2287.4	0	11025	Passeriformes	0.9721185	Passerellidae	0.99551326	DESP	0.99189717	savspa	0.99842846	savspa	0.998428464	2023-09-01	8:54:08 PM	Y
1568	1569.8	0	11025	Passeriformes	0.97214	Passerellidae	0.9955035	DESP	0.99184287	savspa	0.9984505	savspa	0.998450518	2023-09-01	11:42:10 PM	Y
958	959.4	0	11025	Passeriformes	0.9719688	Turdidae	0.956372	THSH	0.94008726	veery	0.98461145	veery	0.984611452	2023-09-01	5:34:00 AM	Y
1005.8	1007.4	0	11025	Passeriformes	0.97192097	Turdidae	0.9534052	THSH	0.9242523	veery	0.9865501	veery	0.986550093	2023-09-01	5:34:48 AM	Y
2466.6	2468	0	11025	Passeriformes	0.97178924	Parulidae	0.95575726			wlswar	0.98375666	wlswar	0.983756661	2023-09-01	4:59:09 AM	Y
685.6	687	0	11025	Passeriformes	0.97167194	Parulidae	0.9559388			wlswar	0.9915975	wlswar	0.991597474	2023-09-01	10:27:28 PM	Y
2365.8	2367	0	11025	Passeriformes	0.9719937	Parulidae	0.9555947			wlswar	0.99147415	wlswar	0.991474152	2023-09-01	10:55:28 PM	Y
2769.4	2771.2	0	11025	Passeriformes	0.97209656	Passerellidae	0.9955533	CUPS	0.9890286	chispa	0.95069104	chispa	0.950691044	2023-09-02	6:02:11 AM	Y

Table 5: 2023 IRRBird1 Nighthawk Results - Harbour Hills Wind Project

Begin Time (s)	End Time (s)	Low Freq (Hz)	High Freq (Hz)	Order	Order Probability	Family	Family Probability	Group	Group Probability	Species	Species Probability	Predicted Category	Probability	Date	Time	Annotation
903	904.2	0	11025	Passeriformes	0.96482384	Turdidae	0.94254243	THSH	0.91436404	herthr	0.99999535	herthr	0.999995351	2023-09-02	6:31:07 AM	Y
1890.4	1892	0	11025	Passeriformes	0.9722034	Turdidae	0.9586508	THSH	0.9449092	woothr	0.9999988	woothr	0.999998808	2023-09-02	5:47:32 AM	Y
2575.2	2576.8	0	11025	Passeriformes	0.97214305	Parulidae	0.9559588	DBUP	0.9546915	naswar	0.8738687	naswar	0.873868704	2023-09-03	10:54:57 PM	Y
3245.6	3246.8	0	11025	Passeriformes	0.9721913	Parulidae	0.9553898	DBUP	0.9558639	naswar	0.9185725	naswar	0.918572485	2023-09-04	1:06:09 AM	Y
2011.6	2013.4	0	11025	Passeriformes	0.9715173	Parulidae	0.94399995	DEWA	0.9999727	norpar	0.99974495	norpar	0.999744952	2023-09-04	9:43:34 PM	Y
3508.4	3510	0	11025	Passeriformes	0.9714035	Turdidae	0.957884	THSH	0.939269	veery	0.9914622	veery	0.991462171	2023-09-04	1:10:31 AM	Y
3570.6	3572.2	0	11025	Passeriformes	0.9721724	Parulidae	0.95638174			bawwar	0.9999993	bawwar	0.999999285	2023-09-07	9:04:33 PM	Y
1860.8	1862	0	11025	Charadriiformes	0.98111516	Scolopacidae	0.9952668			greyel	0.9694045	greyel	0.969404519	2023-09-07	8:36:03 PM	Y
2950	2951.6	0	11025	Passeriformes	0.9722268	Parulidae	0.9562097	DBUP	0.9567007	naswar	0.93749595	naswar	0.937495947	2023-09-07	10:54:12 PM	Y
3381.2	3382.8	0	11025	Passeriformes	0.9693117	Parulidae	0.8947866	DEWA	0.99985325	norpar	0.997971	norpar	0.997970998	2023-09-07	10:01:23 PM	Y
3186.6	3188.2	0	11025	Passeriformes	0.97159034	Parulidae	0.9393437	MWAR	0.9941466	mouwar	0.8241425	mouwar	0.824142516	2023-09-08	1:58:09 AM	Y
1646	1647.8	0	11025	Passeriformes	0.9643936	Passerellidae	0.99162793	DESP	0.9856916	savspa	0.9922942	savspa	0.992294192	2023-09-08	1:32:28 AM	Y
1980.6	1982.4	0	11025	Passeriformes	0.9721604	Passerellidae	0.9954679	DESP	0.9917692	savspa	0.99841976	savspa	0.998419762	2023-09-08	1:38:03 AM	Y
2442.6	2444.4	0	11025	Passeriformes	0.97184575	Turdidae	0.9567644	THSH	0.9396185	veery	0.9892425	veery	0.989242494	2023-09-08	5:45:45 AM	Y
3148.6	3150.2	0	11025	Passeriformes	0.97212976	Turdidae	0.9573003	THSH	0.9406084	veery	0.99446243	veery	0.99446243	2023-09-08	5:57:31 AM	Y
586.2	587.8	0	11025	Passeriformes	0.9600284	Parulidae	0.93864125	BZWA	0.97858924	chswar	0.91723835	chswar	0.917238355	2023-09-10	2:10:48 AM	Y
3222.2	3223.8	0	11025	Passeriformes	0.96993816	Parulidae	0.94796115	BZWA	0.97218406	chswar	0.9423231	chswar	0.942323089	2023-09-10	2:54:44 AM	Y
2350.2	2351.4	0	11025	Passeriformes	0.9701586	Turdidae	0.95504713	THSH	0.93967676	herthr	0.9999981	herthr	0.999998093	2023-09-10	6:40:13 AM	Y
1836.8	1838.6	0	11025	Passeriformes	0.97184306	Parulidae	0.94776607	DEWA	0.999814	norpar	0.9998543	norpar	0.999854326	2023-09-10	3:31:39 AM	Y
2199.8	2201.4	0	11025	Passeriformes	0.9674791	Parulidae	0.93280995	DEWA	0.99955004	norpar	0.9858906	norpar	0.985890627	2023-09-10	3:37:42 AM	Y
1751.4	1753.2	0	11025	Passeriformes	0.9720837	Parulidae	0.954093	DEWA	0.99998724	norpar	0.9999294	norpar	0.999929428	2023-09-10	4:30:13 AM	Y
2639.6	2641	0	11025	Passeriformes	0.97033036	Parulidae	0.9053666	DEWA	0.99994123	norpar	0.9990398	norpar	0.999039829	2023-09-10	5:45:02 AM	Y
2260.2	2262	0	11025	Passeriformes	0.9719392	Parulidae	0.9477127	DEWA	0.99995995	norpar	0.9987331	norpar	0.998733103	2023-09-10	9:36:42 PM	Y
896.6	898	0	11025	Passeriformes	0.9649988	Parulidae	0.9298945	DEWA	0.9999306	norpar	0.99914503	norpar	0.999145031	2023-09-10	10:13:59 PM	Y
2416.8	2418.6	0	11025	Passeriformes	0.97202986	Passerellidae	0.99544984	DESP	0.9917278	savspa	0.9983889	savspa	0.998388886	2023-09-10	4:41:19 AM	Y
520.8	522.6	0	11025	Passeriformes	0.9721106	Passerellidae	0.99546105	DESP	0.9917568	savspa	0.998362	savspa	0.998362005	2023-09-10	9:07:43 PM	Y
539	540.8	0	11025	Passeriformes	0.9718927	Passerellidae	0.99507207	DESP	0.99130404	savspa	0.9981804	savspa	0.998180389	2023-09-10	9:08:01 PM	Y
2327	2328.8	0	11025	Passeriformes	0.9721132	Passerellidae	0.9953987	DESP	0.9917208	savspa	0.99823135	savspa	0.998231351	2023-09-10	9:37:49 PM	Y
2841.2	2842.6	0	11025	Passeriformes	0.9720799	Passerellidae	0.99545175	DESP	0.99172664	savspa	0.99836105	savspa	0.998361051	2023-09-10	9:46:23 PM	Y
1163.8	1165.6	0	11025	Passeriformes	0.96821654	Passerellidae	0.99390984	DESP	0.9870014	savspa	0.9933929	savspa	0.993392885	2023-09-10	10:18:26 PM	Y
967.6	969.4	0	11025	Passeriformes	0.9721966	Passerellidae	0.99511445	SFHS	0.98904103	whtspa	0.99781406	whtspa	0.997814059	2023-09-10	10:15:10 PM	Y
1029	1030.8	0	11025	Passeriformes	0.970619	Parulidae	0.94579077	DEWA	0.9999783	norpar	0.99979335	norpar	0.999793351	2023-09-12	3:14:11 AM	Y
921.8	923.6	0	11025	Passeriformes	0.9700233	Passerellidae	0.99030906	DESP	0.9825362	savspa	0.9939241	savspa	0.993924081	2023-09-12	6:12:25 AM	Y
924.4	926.2	0	11025	Passeriformes	0.9721924	Passerellidae	0.9945589	DESP	0.99030906	savspa	0.9976199	savspa	0.997619927	2023-09-12	6:12:27 AM	Y
928.4	930	0	11025	Passeriformes	0.9706528	Passerellidae	0.98820823	DESP	0.9819203	savspa	0.99430865	savspa	0.99430865	2023-09-12	6:12:31 AM	Y
930.6	932.4	0	11025	Passeriformes	0.9716931	Passerellidae	0.99533725	DESP	0.99155676	savspa	0.99834514	savspa	0.998345137	2023-09-12	6:12:34 AM	Y
939.6	941.4	0	11025	Passeriformes	0.97223544	Passerellidae	0.99558264	DESP	0.9919967	savspa	0.9985343	savspa	0.998534322	2023-09-12	6:12:43 AM	Y
943.2	945	0	11025	Passeriformes	0.972231	Passerellidae	0.99557835	DESP	0.9919768	savspa	0.99852115	savspa	0.998521149	2023-09-12	6:12:46 AM	Y
951.2	953	0	11025	Passeriformes	0.9721771	Passerellidae	0.9954412	DESP	0.9917767	savspa	0.998401	savspa	0.998400986	2023-09-12	6:12:54 AM	Y
959.2	961	0	11025	Passeriformes	0.97223514	Passerellidae	0.9955519	DESP	0.9919716	savspa	0.9985019	savspa	0.998501897	2023-09-12	6:13:02 AM	Y
2853.2	2854.6	0	11025	Charadriiformes	0.9810923	Charadriidae	0.99962115			semplo	0.971235	semplo	0.971234977	2023-09-12	10:42:35 PM	Y
414	415.8	0	11025	Passeriformes	0.97169363	Passerellidae	0.9950098	SFHS	0.9891889	whtspa	0.998403	whtspa	0.998403013	2023-09-12	3:03:56 AM	Y
569.6	571.4	0	11025	Passeriformes	0.97189134	Passerellidae	0.9954495	SFHS	0.9894716	whtspa	0.9980901	whtspa	0.998090088	2023-09-12	5:06:32 AM	Y
2496	2497.6	0	11025	Passeriformes	0.97216034	Passerellidae	0.99550664	SFHS	0.98996174	whtspa	0.998495	whtspa	0.998494983	2023-09-12	5:38:38 AM	Y
2522.6	2524.2	0	11025	Passeriformes	0.97221	Passerellidae	0.99551845	SFHS	0.98999643	whtspa	0.998538	whtspa	0.998538017	2023-09-12	5:39:05 AM	Y
2766.8	2768.4	0	11025	Passeriformes	0.93527126	Passerellidae	0.983886	SFHS	0.9655128	whtspa	0.99365884	whtspa	0.993658841	2023-09-12	5:43:09 AM	Y
683.4	685	0	11025	Passeriformes	0.9592289	Passerellidae	0.9679842	DESP	0.94199365	savspa	0.9804482	savspa	0.980448186	2023-09-13	1:06:25 AM	Y
700.2	702	0	11025	Passeriformes	0.9721982	Passerellidae	0.99554515	DESP	0.99193364	savspa	0.99849343	savspa	0.998493433	2023-09-13	1:06:42 AM	Y
1813	1814.6	0	11025	Passeriformes	0.9271812	Passerellidae	0.9175385	DESP	0.90551835	savspa	0.93107885	savspa	0.931078851	2023-09-13	1:25:15 AM	Y
1682	1683.8	0	11025	Passeriformes	0.9721796	Passerellidae	0.9955468	DESP	0.99194384	savspa	0.998483	savspa	0.998483002	2023-09-13	2:23:04 AM	Y
592.6	593.8	0	11025	Passeriformes	0.97109914	Turdidae	0.9574973	THSH	0.94396985	herthr	0.9999989	herthr	0.999998927	2023-09-18	5:55:56 AM	Y
602.8	604.6	0	11025	Passeriformes	0.97123563	Turdidae	0.9577322	THSH	0.9433561	herthr	0.9999988	herthr	0.999998808	2023-09-18	5:56:06 AM	Y
627.6	628.8	0	11025	Passeriformes	0.9721352	Turdidae	0.9594274	THSH	0.9465487	herthr	0.95194125	herthr	0.951941252	2023-09-18	5:56:31 AM	Y
3140.6	3142.2	0	11025	Passeriformes	0.97218823	Parulidae	0.95563966	MWAR	0.99891996	mouwar	0.99197376	mouwar	0.991973758	2023-09-18	12:38:24 AM	Y
803.8	805.6	0	11025	Passeriformes	0.97219634	Parulidae	0.9518333	MWAR	0.99902904	mouwar	0.9867577	mouwar	0.986757696	2023-09-18	10:57:26 PM	Y
2224	2225.4	0	11025	Passeriformes	0.9677461	Parulidae	0.89170605	DEWA	0.999944	norpar	0.9993037	norpar	0.999303699	2023-09-18	12:23:07 AM	Y
2276.4	2278.2	0	11025	Passeriformes	0.97164404	Parulidae	0.9243798	DEWA	0.99995446	norpar	0.99951553	norpar	0.999515533	2023-09-18	12:23:59 AM	Y
3574.6	3576.4	0	11025	Passeriformes	0.9717168	Parulidae	0.94739515	DEWA	0.9998908	norpar	0.99869365	norpar	0.998693645	2023-09-18	3:45:37 AM	Y
856.4	858	0	11025	Passeriformes	0.97201985	Passerellidae	0.9954146	SFHS	0.9894627	whtspa	0.9982495	whtspa	0.998249471	2023-09-18	12:00:19 AM	Y
1929	1930.6	0	11025	Passeriformes	0.9698934	Passerellidae	0.99429506	SFHS	0.9765786	whtspa	0.99338806	whtspa	0.993388057	2023-09-18	12:18:12 AM	Y
1957.6	1959.2	0	11025	Passeriformes	0.9721737	Passerellidae	0.99547017	SFHS	0.98987097	whtspa	0.9984675	whtspa	0.998467505	2023-09-18	12:18:41 AM	Y
2627.6	2629.4	0	11025	Passeriformes	0.97210276	Parulidae	0.95519215	MWAR	0.99913174	mouwar	0.99636453	mouwar	0.996364534	2023-09-19	2:27:50 AM	Y
2687.2	2689	0	11025	Passeriformes	0.97204024	Parulidae	0.94633377	DEWA	0.9999771	norpar	0.9998185	norpar	0.999818504	2023-09-19	11:26:49 PM	Y

Table 5: 2023 IRRBird1 Nighthawk Results - Harbour Hills Wind Project

Begin Time (s)	End Time (s)	Low Freq (Hz)	High Freq (Hz)	Order	Order Probability	Family	Family Probability	Group	Group Probability	Species	Species Probability	Predicted Category	Probability	Date	Time	Annotation
2707.4	2709	0	11025	Passeriformes	0.9715224	Parulidae	0.9353519	DEWA	0.9999645	norpar	0.9994336	norpar	0.999433577	2023-09-19	11:27:09 PM	Y
2132.6	2134.2	0	11025	Passeriformes	0.97220755	Passerellidae	0.9955497	SFHS	0.9901334	whtspa	0.99858534	whtspa	0.998585343	2023-09-19	1:19:35 AM	Y
803.8	805.4	0	11025	Passeriformes	0.9661824	Parulidae	0.90586793	SBUF	0.8831626	palwar	0.99999475	palwar	0.999994755	2023-09-20	8:53:26 PM	Y
417.4	419.4	0	11025	Charadriiformes	0.98148376	Scolopacidae	0.9957281			solsan	0.97620004	solsan	0.976200044	2023-09-20	7:46:59 PM	Y
899.6	902.8	0	11025	Passeriformes	0.9711159	Turdidae	0.95926553			amerob	0.9999995	amerob	0.999999523	2023-09-21	6:55:02 AM	Y
904	905.6	0	11025	Passeriformes	0.9722353	Turdidae	0.9598478			amerob	0.9999999	amerob	0.999999881	2023-09-21	6:55:06 AM	Y
1724.4	1726	0	11025	Passeriformes	0.97183615	Turdidae	0.95909506	THSH	0.94592875	herthr	0.9999988	herthr	0.999998808	2023-09-21	6:08:47 AM	Y
2231.4	2235	0	11025	Passeriformes	0.9719145	Motacillidae	0.93745875			amepip	0.96512604	amepip	0.965126038	2023-09-22	7:15:13 AM	Y
2242.6	2244.2	0	11025	Passeriformes	0.97211075	Motacillidae	0.93756115			amepip	0.96477604	amepip	0.964776039	2023-09-22	7:15:25 AM	Y
2262.4	2264	0	11025	Passeriformes	0.9696246	Motacillidae	0.9350856			amepip	0.93693066	amepip	0.936930656	2023-09-22	7:15:44 AM	Y
1148.4	1149.6	0	11025	Passeriformes	0.9721539	Motacillidae	0.9166992			amepip	0.92690396	amepip	0.926903963	2023-09-22	8:55:10 PM	Y
451.8	453.6	0	11025	Passeriformes	0.9719785	Turdidae	0.95869553	GCB1	0.9997845	gycthr	0.9999975	gycthr	0.999997497	2023-09-22	3:45:34 AM	Y
610.4	612.4	0	11025	Passeriformes	0.9720054	Turdidae	0.95903873	THSH	0.9458847	herthr	0.9999989	herthr	0.999998927	2023-09-22	6:48:12 AM	Y
783.2	784.6	0	11025	Passeriformes	0.9690053	Turdidae	0.9505284	THSH	0.9317276	herthr	0.9999987	herthr	0.999998689	2023-09-22	6:51:05 AM	Y
1534.4	1535.8	0	11025	Passeriformes	0.9705217	Turdidae	0.9562201	THSH	0.94185996	herthr	0.9999987	herthr	0.999998689	2023-09-22	7:01:34 PM	Y
2639.8	2641.4	0	11025	Passeriformes	0.9721905	Parulidae	0.95633465	DBUP	0.9569899	naswar	0.9831935	naswar	0.983193517	2023-09-22	7:22:02 AM	Y
2646.2	2647.6	0	11025	Passeriformes	0.9722198	Parulidae	0.9541529	DBUP	0.93833965	naswar	0.8825351	naswar	0.8825351	2023-09-22	7:22:08 AM	Y
2653.8	2655.2	0	11025	Passeriformes	0.9722014	Parulidae	0.9563859	DBUP	0.9568741	naswar	0.98630464	naswar	0.986304641	2023-09-22	7:22:16 AM	Y
2655.8	2657.4	0	11025	Passeriformes	0.9721234	Parulidae	0.95629627	DBUP	0.95714015	naswar	0.98510355	naswar	0.985103548	2023-09-22	7:22:18 AM	Y
2701	2702.2	0	11025	Passeriformes	0.97215724	Parulidae	0.9543967	DBUP	0.95325243	naswar	0.9540992	naswar	0.954099178	2023-09-22	7:23:03 AM	Y
1896.6	1898.4	0	11025	Passeriformes	0.971729	Parulidae	0.9479205	SBUF	0.9300724	palwar	0.9999993	palwar	0.999999285	2023-09-22	2:09:39 AM	Y
6.4	8	0	11025	Charadriiformes	0.98148835	Scolopacidae	0.9957281			solsan	0.97605634	solsan	0.976056337	2023-09-22	7:36:08 PM	Y
2926.8	2928.2	0	11025	Passeriformes	0.9493683	Parulidae	0.87625134	SBUF	0.8705414	palwar	0.99999666	palwar	0.999996662	2023-09-23	7:24:49 AM	Y
152.8	154.4	0	11025	Charadriiformes	0.9814311	Scolopacidae	0.995678			greyl	0.9998356	greyl	0.99983561	2023-09-24	2:36:35 AM	Y
2160.2	2161.8	0	11025	Passeriformes	0.9427828	Turdidae	0.8854948	THSH	0.8168848	herthr	0.9999962	herthr	0.999996185	2023-09-24	6:10:03 AM	Y
2584	2585.4	0	11025	Passeriformes	0.94883174	Turdidae	0.9279739	THSH	0.89299154	herthr	0.9999926	herthr	0.999992609	2023-09-24	6:17:07 AM	Y
2612.8	2614.6	0	11025	Passeriformes	0.97208226	Turdidae	0.9593084	THSH	0.9463249	herthr	0.99999905	herthr	0.999999046	2023-09-24	6:17:36 AM	Y
2636.6	2638.2	0	11025	Passeriformes	0.9463431	Turdidae	0.9058827	THSH	0.8556064	herthr	0.9999937	herthr	0.999993682	2023-09-24	6:18:00 AM	Y
2801	2802.8	0	11025	Passeriformes	0.970761	Turdidae	0.9561358	THSH	0.942102	herthr	0.9999982	herthr	0.999998212	2023-09-24	6:20:44 AM	Y
2814.2	2816	0	11025	Passeriformes	0.9692684	Turdidae	0.95545495	THSH	0.9410866	herthr	0.9999989	herthr	0.999998927	2023-09-24	6:20:57 AM	Y
2826.4	2827.8	0	11025	Passeriformes	0.9638205	Turdidae	0.9387105	THSH	0.9126194	herthr	0.9999956	herthr	0.999995589	2023-09-24	6:21:09 AM	Y
965.4	967	0	11025	Passeriformes	0.9721799	Parulidae	0.95503724	MWAR	0.9989423	mouwar	0.9902014	mouwar	0.990201414	2023-09-24	2:50:07 AM	Y
2229.2	2230.4	0	11025	Passeriformes	0.9720976	Parulidae	0.9553069	MWAR	0.9989507	mouwar	0.988035	mouwar	0.988035023	2023-09-24	6:11:12 AM	Y
2244.4	2245.8	0	11025	Passeriformes	0.9721443	Parulidae	0.954964	MWAR	0.9988986	mouwar	0.9759211	mouwar	0.975921094	2023-09-24	6:11:27 AM	Y
3528.4	3530	0	11025	Passeriformes	0.97021616	Parulidae	0.94418734	SBUF	0.9324679	palwar	0.99999964	palwar	0.999999642	2023-09-24	11:30:50 PM	Y
275.2	277	0	11025	Passeriformes	0.97110975	Parulidae	0.95519876	SBUF	0.93948597	btbwar	0.9341621	btbwar	0.93416208	2023-09-26	6:32:35 PM	Y
1457.6	1459.2	0	11025	Passeriformes	0.9668509	Parulidae	0.9505525	SBUF	0.9350854	btbwar	0.9248483	btbwar	0.924848318	2023-09-26	6:52:18 PM	Y
1461	1462.6	0	11025	Passeriformes	0.96465665	Parulidae	0.9479571	SBUF	0.93207324	btbwar	0.91416776	btbwar	0.914167762	2023-09-26	6:52:21 PM	Y
1293	1295	0	11025	Charadriiformes	0.98149157	Scolopacidae	0.9957283			greyl	0.9998436	greyl	0.999843597	2023-09-26	9:49:35 PM	Y
1056.8	1058.2	0	11025	Passeriformes	0.9689298	Turdidae	0.953209	THSH	0.9370099	herthr	0.9999951	herthr	0.999995112	2023-09-26	6:45:37 PM	Y
2544	2545.6	0	11025	Passeriformes	0.9722139	Parulidae	0.95645416	SBUF	0.9068793	palwar	0.9999995	palwar	0.999999523	2023-09-26	6:52:39 AM	Y
1555	1556.6	0	11025	Passeriformes	0.9720606	Turdidae	0.95522934			amerob	0.9999652	amerob	0.999965191	2023-10-06	7:25:27 AM	Y
1564.2	1565.8	0	11025	Passeriformes	0.97216445	Turdidae	0.9596134			amerob	0.99999964	amerob	0.999999642	2023-10-06	7:25:36 AM	Y
1586.6	1588.4	0	11025	Passeriformes	0.9720976	Turdidae	0.95962316			amerob	0.99999976	amerob	0.999999762	2023-11-02	7:52:29 AM	Y
3114.2	3115.6	0	11025	Passeriformes	0.96739525	Turdidae	0.9564246			amerob	0.99997616	amerob	0.999976158	2023-11-04	8:14:56 AM	Y
2910	2911.6	0	11025	Passeriformes	0.97223365	Turdidae	0.9597608			amerob	0.9999999	amerob	0.999999881	2023-11-07	8:07:32 AM	Y
2.8	4.4	0	11025	Passeriformes	0.9703123	Passerellidae	0.9901687	CUPS	0.9504041	amtspa	0.99873954	amtspa	0.998739541	2023-11-08	8:18:05 AM	Y
3014.2	3015.6	0	11025	Passeriformes	0.9585129	Turdidae	0.94804376			amerob	0.99016285	amerob	0.990162849	2023-11-12	8:03:16 AM	Y
3559.2	3560.8	0	11025	Passeriformes	0.972234	Turdidae	0.95985407			amerob	0.9999999	amerob	0.999999881	2023-11-15	8:09:21 AM	Y
1296	1297.2	0	11025	Passeriformes	0.9707338	Passerellidae	0.9899621	CUPS	0.9748853	amtspa	0.99880743	amtspa	0.99880743	2023-11-15	8:31:38 AM	Y
1189.8	1191	0	11025	Passeriformes	0.9707773	Turdidae	0.9402402			amerob	0.9889631	amerob	0.988963127	2023-11-20	8:24:52 AM	Y
1760	1761.4	0	11025	Passeriformes	0.9692516	Passerellidae	0.994457	CUPS	0.9808889	amtspa	0.9986253	amtspa	0.998625278	2023-11-21	8:33:22 AM	Y
441.2	443	0	11025	Passeriformes	0.97000164	Passerellidae	0.99423474	CUPS	0.97806805	amtspa	0.9989851	amtspa	0.998985112	2023-11-21	5:10:21 PM	Y

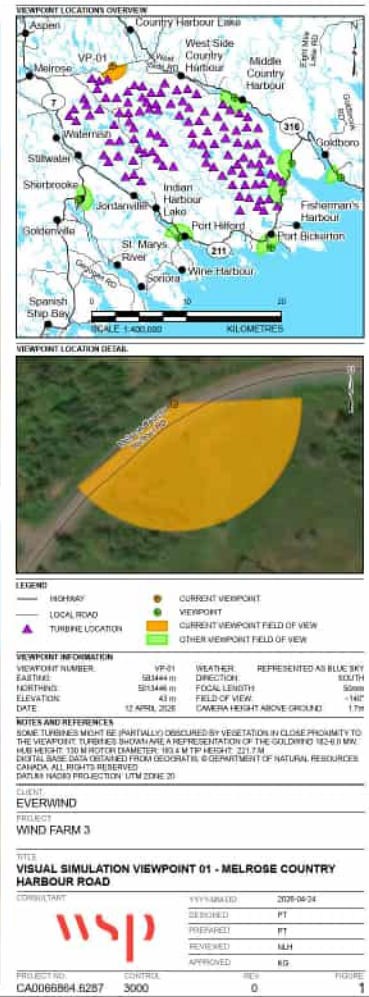
APPENDIX O

WSP VISUAL SIMULATIONS

VIEWPOINT SIMULATION



BASELINE PHOTO



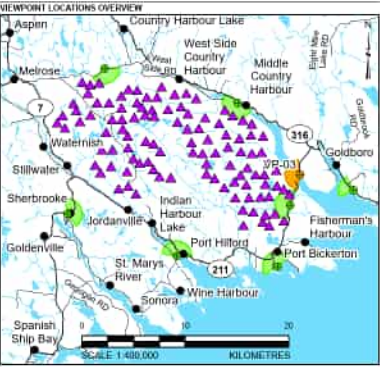


EXPANDED	HIGHWAY ELEVATED ROAD TURBINE LOCATION	CURRENT VIEWPOINT VIEWPOINT CURRENT VIEWPOINT FIELD OF VIEW	OTHER VIEWPOINT FIELD OF VIEW
EQUIPMENT INFORMATION EQUIPMENT NAME: WSP-1 EASTING: 800000.0 NORTING: 800000.0 BURSTING: 12 April 2008	WEATHER: REPRESENTATIVE AS BLUE OF DIRECTION: SOUTHWEST FOCAL LENGTH: 3000mm FIELD OF VIEW: 10.4° WEIGHT: 1.5kg WEIGHT ABOVE GROUND: 1.5kg	NOTES AND REFERENCES THIS DOCUMENT IS NOT FINALLY ENDORSED BY THE U.S. ARMY. IT IS A WORK IN PROGRESS AND IS SUBJECT TO CHANGE WITHOUT NOTICE. IT IS NOT TO BE USED FOR OFFICIAL PURPOSES. IT IS NOT TO BE DISTRIBUTED OUTSIDE THE U.S. ARMY. IT IS NOT TO BE USED FOR OFFICIAL PURPOSES. IT IS NOT TO BE DISTRIBUTED OUTSIDE THE U.S. ARMY.	
WIND FARM 3			

VIEWPOINT SIMULATION



BASELINE PHOTO



VIEWPOINT INFORMATION

VIEWPOINT NUMBER:	VP-03	WEATHER:	REPRESENTED AS BLUE SKY
EASTING:	662369 m	DIRECTION:	WEST
NORTHING:	9902197 m	FOCAL LENGTH:	50mm
ELEVATION:	3 m	FIELD OF VIEW:	160°
DATE:	12 APRIL 2025	CAMERA HEIGHT ABOVE GROUND:	1.7m

NOTES AND REFERENCES:
SOME TURBINES MIGHT BE PARTIALLY OBTURED BY VEGETATION IN CLOSE PROXIMITY TO THE VIEWPOINT. TURBINES SHOWN ARE A REPRESENTATION OF THE GOLDWIND 162.8 MW HUB HEIGHT: 130 M ROTOR DIAMETER: 162.4 M TIP HEIGHT: 221.7 M
DIGITAL BASE DATA OBTAINED FROM GEORATIS © DEPARTMENT OF NATURAL RESOURCES CANADA. ALL RIGHTS RESERVED.
DATUM: NAD83 PROJECTION: UTM ZONE 20

CLIENT
EVERWIND

PROJECT
WIND FARM 3

TITLE
VISUAL SIMULATION VIEWPOINT 03 - COUNTRY HARBOUR FERRY EAST SIDE

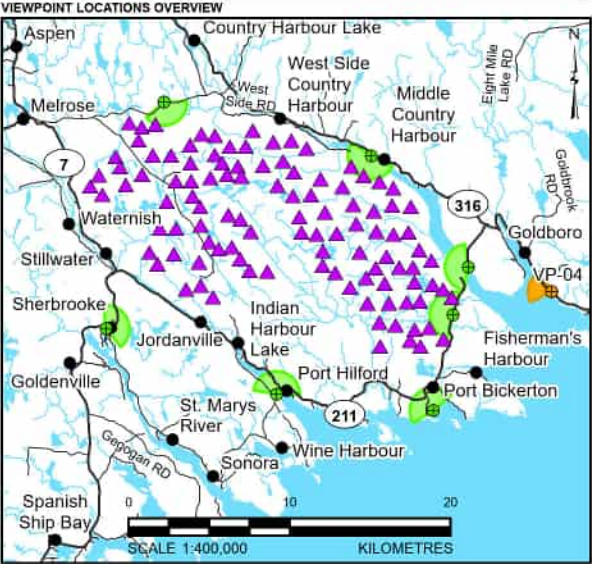
CONSULTANT	WSP	DATE	2025-04-24
DESIGNED	PT		
DRAWN	PT		
CHECKED	NEH		
APPROVED	KD		

PROJECT NO	CONTROL	REV	FIGURE
CA0066864.0287	3000	0	3

VIEWPOINT SIMULATION



BASELINE PHOTO



LEGEND

— HIGHWAY	● CURRENT VIEWPOINT
— LOCAL ROAD	● VIEWPOINT
▲ TURBINE LOCATION	● CURRENT VIEWPOINT FIELD OF VIEW
	● OTHER VIEWPOINT FIELD OF VIEW

VIEWPOINT INFORMATION

VIEWPOINT NUMBER:	VP-04	WEATHER:	REPRESENTED AS BLUE SKY
EASTING:	607547 m	DIRECTION:	NORTHWEST
NORTHING:	5001676 m	FOCAL LENGTH:	50mm
ELEVATION:	30 m	FIELD OF VIEW:	~85°
DATE:	12 APRIL 2026	CAMERA HEIGHT ABOVE GROUND:	1.7m

NOTES AND REFERENCES

SOME TURBINES MIGHT BE (PARTIALLY) OBSCURED BY VEGETATION IN CLOSE PROXIMITY TO THE VIEWPOINT. TURBINES SHOWN ARE A REPRESENTATION OF THE GOLDWIND 182-8.0 MW. HUB HEIGHT: 130 M ROTOR DIAMETER: 183.4 M TIP HEIGHT: 221.7 M

DIGITAL BASE DATA OBTAINED FROM GEOGRATIS, © DEPARTMENT OF NATURAL RESOURCES CANADA. ALL RIGHTS RESERVED

DATUM: NAD83 PROJECTION: UTM ZONE 20

CLIENT
EVERWIND

PROJECT
WIND FARM 3

TITLE
VISUAL SIMULATION VIEWPOINT 04 - HIGHWAY 316

CONSULTANT	YYYY-MM-DD	2026-04-24
	DESIGNED	PT
	PREPARED	PT
	REVIEWED	NLH
	APPROVED	KG

PROJECT NO.	CONTROL	REV.	FIGURE
CA0066864.6287	3000	0	4

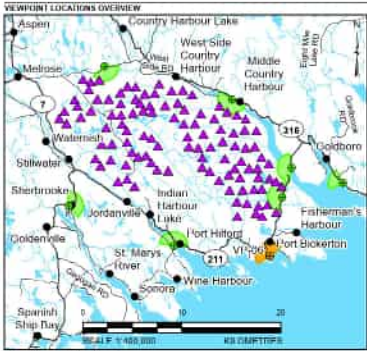
A wide panoramic photograph showing a landscape with a road on the left, a field of low vegetation in the foreground, and a line of wind turbines in the distance under a clear blue sky. The road has a yellow double line. The field is covered in dry, brownish vegetation. The wind turbines are white and spaced out across the horizon. The sky is a clear, pale blue.

[illegible]

VIEWPOINT SIMULATION



BASELINE PHOTO



VIEWPOINT INFORMATION					
VIEWPOINT NAME	VIEWPOINT	VIEWPOINT	VIEWPOINT	VIEWPOINT	
EASTING	460425 m	NORTHING	50m	DATE	12 APRIL 2026
ELEVATION	2 m	FIELD OF VIEW	-172°	CAMERA HEIGHT ABOVE GROUND	1.7m

NOTE: BONE TURNER IS NOT PARTIALLY OBSERVED BY VEGETATION 8100 FEET PROXIMITY TO THE VIEWPOINT TURNER SHOWING GIVE A REPRESENTATION OF THE GOLDEN 100 8100 FEET PROXIMITY 130 M ROTOR DANGER: 18.4 M TURNER: 221.7 M

DATA BASE DATA OBTAINED FROM GEOGRAPHIC 6 DEPARTMENT OF NATURAL RESOURCES CANADA, ALL RIGHTS RESERVED

OUTLINE: BONE PROJECTION: LTM 2006 20

NOTE: SOME TURBINES MAY BE PARTIALLY OBSCURED BY VEGETATION IN CLOSE PROXIMITY TO THE VIEWPOINT. TURBINES SHOWN ARE A REPRESENTATION OF THE GOLDWIND 162 & 8 MW HUB HEIGHT 10.5M PITCH DIAMETER 10.5M TIP HEIGHT 22.1M. DIGITAL BASE DATA OBTAINED FROM GEORATIS, © DEPARTMENT OF NATURAL RESOURCES CANADA. ALL RIGHTS RESERVED. DATUM: NAD83 PROJECTION: UTM ZONE 18

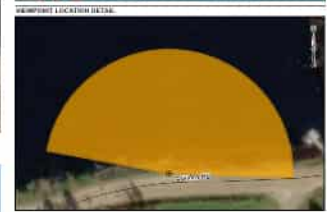
CLIENT: EVERWIND

PROJECT: WIND FARM 3

TITLE: VISUAL SIMULATION VIEWPOINT 06 - PORT BICKERTON WHARF

DESIGNED	PT
PREPARED	PT
REVIEWED	REH
APPROVED	RS

PROJECT NO.	CA006664 6267	DATE	3000	REV.	0	PAGE	6
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[illegible]

VIEWPOINT SIMULATION



BASELINE PHOTO



VIEWPOINT INFORMATION

VIEWPOINT NUMBER:	VP-08	WEATHER:	REPRESENTED AS BLUE SKY
EASTING:	579653 m	DIRECTION:	NORTHEAST
NORTHING:	489388 m	FOCAL LENGTH:	50m
ELEVATION:	6 m	FIELD OF VIEW:	~150°
DATE:	12 APRIL 2025	CAMERA HEIGHT ABOVE GROUND:	1.7m

NOTES AND REFERENCES
SOME TURBINES MIGHT BE PARTIALLY OBSCURED BY VEGETATION IN CLOSE PROXIMITY TO THE VIEWPOINT. TURBINES SHOWN ARE A REPRESENTATION OF THE GOLDWIND 182 II.6 MW HUB HEIGHT: 130 M ROTOR DIAMETER: 182.4 M TIP HEIGHT: 221.7 M
DIGITAL BASE DATA OBTAINED FROM GEORATIS, © DEPARTMENT OF NATURAL RESOURCES CANADA. ALL RIGHTS RESERVED.
DATUM: NAD83 PROJECTION: UTM ZONE 20

CLIENT
EVERWIND
PROJECT
WIND FARM 3

TITLE
VISUAL SIMULATION VIEWPOINT 08 - SHERBROOKE - ST
MARY'S RIVER

CONSULTANT	WSP	DATE	2025-04-24
DESIGNED	PT		
DRAWN	PT		
CHECKED	NEH		
APPROVED	KD		

PROJECT NO.	CONTROL	REV	FIGURE
CA0066864.6287	3000	0	8

APPENDIX P
NSCCTH HERITAGE RESEARCH PERMIT

Heritage Research Permit (Archaeology)

Special Places Protection Act 1989

(Original becomes Permit when approved by
Communities, Culture, Tourism and Heritage)

Office Use Only
Permit Number:

A2026NS045

Greyed out fields will be made publically available. Please choose your project name accordingly

Surname **Petersen**

First Name **Roderick**

Project Name

Wind Farm 3 Project
Archaeological Resource Impact Assessment
Archaeological Potential Modelling 2026
Guysborough County

Name of Organization

Cultural Resource Management Group Limited

Representing (if applicable) **EverWind Fuels**

Permit Start Date **26 March 2026**

Permit End Date **31 December 2026**

General Location: The Study Area extends over a large, irregularly shaped swath of Crown land in Guysborough County, roughly bounded by the Highway 7 on the west, the Indian Harbour lakes and Port Bickerton on the south, Highway 211 and Country Harbour on the east, and Melrose Country Harbour Road on the north.

Specific Location: *(cite Borden numbers and UTM designations where appropriate and as described separately in accordance with the attached Project Description. Please refer to the appropriate Archaeological Heritage Research Permit Guidelines for the appropriate Project Description format)*

Centrepint 616616.00 mE 5011869.00 mN
North Extent 616616.00 mE 5022015.00 mN
East Extent 628321.00 mE 5011869.00 mN
South Extent 616616.00 mE 5001723.00 mN
West Extent 604911.00 mE 5011869.00 mN

Permit Category:

Please choose one

☐

Category A – Archaeological Reconnaissance

☐

Category B – Archaeological Research

☒

Category C – Archaeological Resource Impact Assessment

☒

I certify that I understand my responsibilities as a Heritage Research Permit holder under the Nova Scotia Special Places Protection Act and that I have read, understand, and will abide by the requirements outlined in the Heritage Research Permit Guidelines for the above noted category.

☒

I certify that I will adhere to all required timelines for submitting permit reports, MARI forms, and collections. I acknowledge that failure to do so may prevent or delay me from receiving an approved permit in the future.

Signature of Applicant:

Rod Petersen

Date: **19 March 2026**

Approved by Director

Beth Lewis

Digitally signed by Beth Lewis
Date: 2026.03.26 08:07:12
-03'00'

APPENDIX Q

STRUM PROJECT TEAM CVs

AREAS OF SPECIALIZATION

- Project Management
- Environmental Assessment
- Ecological Assessment
- Habitat Assessment
- Regulatory Permitting, Monitoring, and Compliance Assessments
- Environmental Protection Plans
- Wetland/Watercourse Alterations
- Wetland and Fish Habitat Compensation

RELEVANT EXPERIENCE

Ms. Smith is the Vice President of Environmental Assessments and Approvals. She has a strong background in a variety of environmental program and policy areas. Ms. Smith has extensive experience leading teams, as well as building relationships and communicating with the public, regulators, the Mi'kmaq of Nova Scotia, clients, experts, and other stakeholders.

Prior to her appointment as Vice President of Environmental Assessments and Approvals at Strum, Ms. Smith held a Team Lead position with the Impact Assessment Agency of Canada. That role included the following:

- Led a team of professionals in completing federal environmental and impact assessments to support the Minister in decision making.
- Managed all aspects of assembling project teams, executing priorities, performance, deliverables, and overall quality.
- Supported the team in conducting Indigenous consultation, coordinating with federal and provincial departments, communicating with proponents, and engaging with stakeholders.
- Supported the team in the technical review of regulatory submissions under the *Canadian Environmental Assessment Act, 2022* and the *Impact Assessment Act*.
- Advised senior Agency officials on complex regulatory considerations.

Ms. Smith also held multiple roles with Nova Scotia Environment which included the following responsibilities:

- Led the development, management, and implementation of the Risk-Based Audit Project. The purpose of this corporate priority project was to modernize inspection services by using risk to maximize the allocation of limited resources while fulfilling the Department's mandate.
- Conducted extensive cross-sector collaboration within the Department, including all regions, inspectorates, divisions, and staff levels to ensure the project met the needs of working level staff and the goals of senior management.
- Provided strategic policy support and analysis for departmental programs and policies using the Regulatory Management Process.
- Conducted focus group sessions, coordinated stakeholder consultation, and provided recommendations to senior management.
- Completed inspections, responded to complaints, reviewed applications, and generated approvals related to the protection and sustainable use of air, land, and water resources in NS.

At Strum, Ms. Smith previously held progressive management roles including acting as the Team Lead during a long-term secondment of a senior manager and managed all aspects of a variety of projects within the Environment Group, including environmental assessments, watercourse alteration applications, wetland alteration applications, wetland

EDUCATION

- MES, Dalhousie University, Halifax, NS (2004)
- BSc. (Honours), Environmental Science, Acadia University, Wolfville, NS (2001)

TRAINING

- GBA+ Micro-learning Series (2022)
- Cultural Safety (2021)
- Unconscious Bias (2021)
- Emergency First Aid (2021)
- Management Development Program (2019)
- Advanced Training, *Impact Assessment Act* (2019)
- Introduction to CEAA 2012 (November 2012)
- Water Management & Wetland Restoration Training Course, University of Guelph (2010)

compensation, environmental protection plans, environmental monitoring, and ecological assessments. This also included successfully and simultaneously managing multiple provincial Environmental Assessments. Ms. Smith also has extensive experience creating budgets, schedules, staff resourcing and supervision, deliverables, and client communication. She has presented at public open houses, community liaison committee meetings, public hearings, and testified at a UARB hearing.

REPRESENTATIVE PROJECTS AND ROLES

Strum Consulting (current)

Wind Power Environmental Assessments, 2022-Present – Senior Reviewer: Providing senior review and management on several 100 MW+ wind farms in Nova Scotia.

Post-Approval Work, EverWind Point Tupper Green Hydrogen/Ammonia Project Phase 1, NS, 2023 – Senior Reviewer: On-going post-approval work (following approval of the EA Registration Document) including the development of environmental management and monitoring plans. These plans are developed to avoid/mitigate potential impacts to nearby environmental and residential receptors throughout the lifespan of the Project.

Environmental Assessment EverWind Point Tupper Green Hydrogen/Ammonia Project - Phase 1, NS, 2022 – Senior Reviewer: Completed senior review of field studies and key reporting requirements for the submission of an EA Registration Document for a green ammonia/hydrogen facility located in Cape Breton, NS. This was the first green ammonia/hydrogen facility to be approved in both Nova Scotia and Canada.

Impact Assessment Agency

Boat Harbour Remediation Project, 2018-2022 – Team Lead: Team Lead for the Agency's technical review of this project, as well as associated consultation with the Mi'kmaq of Nova Scotia and public engagement. This project conducted the Agency's first external technical review as part of the process.

Beaver Dam Mine Project, Fifteen Mile Stream Project, 2017-2022– Team Lead: Team Lead for the Agency's technical review of these gold mining projects, as well as associated consultation with the Mi'kmaq of Nova Scotia and public engagement.

Canso Space Port, Northern Pulp Replacement Effluent Treatment System, Touquoy Mine Expansion, Goldboro Gold Mine, 2017-2021 – Team Lead: Team Lead for requests to the Minister for these projects to be subject to the *Impact Assessment Act*. Review and analysis involved input from federal departments and a decision package to the Minister.

Howse Property Iron Mine Project, 2018– Team Lead: Team Lead for the Minister's decision package for the Howse Property Iron Mine.

Strum Consulting (past)

Wind Power Environmental Assessments, 2011-2014 – Project Manager/Team Lead: Project managed and coordinated all aspects of the provincial EA process for seven wind power projects ranging in size from 4 MW to 10 MW. Project components included wetlands, watercourses, wildlife, avifauna, bats, sound, shadow flicker, visual aesthetics, socio-economic conditions, and effects assessment. Also highly involved in public engagement activities including participation at several municipal planning meetings and project open houses, as well as the preparation of presentation materials (e.g. posters, handouts, etc.).

South Canoe Wind Project, 2011-2013 – Project Manager/Team Lead: Project managed and coordinated the completion of numerous desktop and field studies in support of a 100 MW wind power project. Studies included exclusion mapping; a desktop review of site habitat, species at risk (including flora, fauna, and avian species), and archaeological resources; a sound and shadow flicker assessment; a visual impact assessment; and field assessment for wetlands, watercourses, wildlife, and avian species. Managed the launch of the project website and completed the effects assessment for the biophysical components of the provincial environmental assessment registration document. Also developed presentation materials for and attended three public open houses and delivered multiple technical presentations to the Community Liaison Committee and as part of the Development Agreement Public Hearing process.

AREAS OF SPECIALIZATION

- Field Program Design and Logistics Coordination
- Environmental Assessment
- Renewable Energy
- Marine near-shore and Water Quality Monitoring
- Regulatory and Public Engagement

RELEVANT EXPERIENCE

Mr. Doane joined the Strum team in 2020 as an Environmental Intern, while working towards his Master of Resource and Environmental Management degree at Dalhousie. While studying at Dalhousie, Angus specialized in natural resource management in Nova Scotia, especially in the coastal zone. Angus obtained his Bachelor of Science degree in 2019 from Mount Allison University, where he specialized in Environmental Chemistry and Microbiology. His primary focus with the Environmental Assessments & Approvals team at Strum is project management, where he applies his depth of knowledge in field studies and coordination to guide projects through the regulatory processes required for development.

Angus is active in leading environmental assessments, biophysical component studies, and completing radar and wildlife surveys, and other ecological studies. He has planned and coordinated multi-team fieldwork across large projects throughout Nova Scotia, New Brunswick and Newfoundland. He is knowledgeable in provincial and federal approvals and permitting processes and works closely with all staff to prepare and review reports and regulatory submissions, as well as prepare materials for, and participate in, public and regulator consultation and engagement activities for Environmental Assessments. He serves on the Joint Occupational Health and Safety committee as a group and regional representative for Antigonish.

Angus held a previous position with Environment and Climate Change Canada (ECCC) as a water quality technician. He conducted water sampling in many bays, harbours, and estuaries around Nova Scotia from Pubnico to Cape North, dealing with all matters of leading a field crew on a day-to-day basis. This included trailering, launch and recover practices, regular boat, motor, trailer and vehicle maintenance, as well as training and aiding new staff. Processing of samples was also completed daily using the modified A1 method in a level 3 CALA certified microbiology lab.

REPRESENTATIVE PROJECTS AND ROLES

Wind Power Environmental Assessments, NS, NB, NL 2020-Present – Environmental Scientist/Project Manager: Providing project management, coordination and field work on several 100 MW+ wind farms in Nova Scotia. Coordinated and completed all aspects of field surveys for environmental assessments, including wetland, watercourse, fish & fish habitat, avian, avian radar, bat, wildlife, flora, and lichen surveys. Preparing, reviewing, and organizing field data using several methods of

EDUCATION

- Master of Resource and Environmental Management (MREM) - Dalhousie University, Halifax, NS (2021)
- Bachelor of Science (Hons.) - Mount Allison University, Sackville, NB (2019)

TRAINING

- Wetland Ecosystem Service Protocol – Atlantic Canada (WESP-AC) – Maritime College of Forest Technology (2021)
- Wetland Delineation Training – Maritime College of Forest Technology (2020)
- Small Vessel Operator Proficiency “SVOP” and Marine Emergency Duties “MED A3” - Survival Systems Training Limited (2017)
- Wilderness First Aid - St. John’s Ambulance (2022)
- Backpack Electrofishing – Canadian Rivers Institute (2021)
- VHF Radio Restricted Operators Certificate – Industry Canada (2017)

collection. Preparing materials for and leading public engagement activities, as well as aiding in the preparation of materials for public outreach. Leading regulatory meetings to brief provincial and federal agencies on project activities. Preparing EA related documents, including methodologies, effects assessments, and desktop reviews.

Melford Atlantic Gateway Terminal Project, NS, 2020-Present – Environmental Scientist: Completed comprehensive research as partial fulfillment of the wetland compensation requirement for the Melford Terminal's wetland alteration. This included a comprehensive search of potential sites across Antigonish and Guysborough counties based on the precedence of other wetland compensation projects, as well as aiding in the design and implementation of the engineered wetlands to be created. Supported regulatory consultation for watercourse alteration applications and impacts to fish and fish habitat, especially salmonid species.

Hydroelectric System regulatory upkeep and Monitoring, NS, 2021-Present - Project Coordinator/ Environmental Scientist: Completed swallow nesting/monitoring surveys during the fall migration period. Designed, coordinated, and conducted a wetland and wetland fish & fish habitat monitoring program considering wetland fish habitat functions.

Environmental Management Plan Development for Mining, NS, 2023-Present – Project Manager: Overseeing the development of Environmental Management Plan documents for an industrial scale export-focused mining operation in the Strait Area. Aiding Junior staff in the development of plan documents and reviewing plans prior to submission to regulators.

Avian Radar Studies for Wind Development, NL, 2022-2024 – Environmental Scientist – Aided in the design and construction of avian radar monitoring systems for four season deployment in harsh coastal and inland environments in Newfoundland, including siting and remote monitoring.

Environmental Assessment EverWind Point Tupper Green Hydrogen/Ammonia Project - Phase 1, NS, 2022 – Environmental Scientist: Completed field studies and key reporting requirements for the submission of the EA Registration Document for a green ammonia/hydrogen facility located in Cape Breton, NS. This was the first green ammonia/hydrogen facility to be approved in Canada.

Transmission Line Project, NS, 2020-2023 – Environmental Scientist/Field Coordinator: Planned, coordinated and completed Wetland and watercourse assessments, wildlife surveys, and rare plant and lichen surveys, along the linear corridor spanning 100 km. These surveys involved preparing desktop and safety tools for field staff, as well as preparing reports respective to each of the surveys.

Boat Harbor Remediation Project, NS, 2021, Environmental Scientist – Monitored water quality through seasonal tide cycles, before aiding in the research and installation of mitigations to improve water quality and reduce fish mortalities at the Boat Harbor remediation site.

Watercourse Alteration Approval and Fish Surveys, NS, 2021 – Environmental Scientist: Conducted electrofishing / fish salvage for an emergency watercourse alteration along a section of railway. This involved the capture, identification, documentation, and release of fish from the impacted section of the watercourse. Conducted further watercourse assessments to aid in the alteration approval process.

Canadian Shellfish Sanitation Plan – Shellfish Water Classification Program, NS, 2017-2019 – Water Quality Technician: Completed three summers of fecal coliform testing of coastal waters around the province of Nova Scotia to aid in the classification of areas for shellfish harvesting. This involved extensive travel, sample collection, processing and overall upkeep of field equipment across a fleet of boats, vehicles, and associated gear. Lab and sample processing work included QA and QC procedures, sample reading, media production, waste management, and sample inoculation.

Strengths and Weaknesses of Avian Radar for Management and Monitoring Applications, 2020 – MREM Final Research Project: As a final project for the Master of Resource and Environmental Management program, an extensive research project on the topic of marine radar for avian applications was undertaken. This included literature research across all jurisdictions for information regarding the use of radar of tracking birds, either for monitoring or other applications. On top of the literature research, there was extensive discussion with industry users on the advantages and disadvantages of the technology, data processing techniques, and overall limitations. The findings of this project were paired directly with Radar Assessments undertaken with Strum Consulting.

AREAS OF SPECIALIZATION

- Environmental Assessments
- Flora and Fauna Surveys
- Species at Risk Assessments
- Field Implementation
- Technical Review
- Project Management
- Project Design
- Staff Training

RELEVANT EXPERIENCE

Mr. MacDonald a Senior Project Manager and Terrestrial Lead. He has a strong terrestrial survey design and oversight background and extensive experience in avian and botanical studies. Mark provides survey design and oversees the drafting of terrestrial baseline reports and effects assessments for many projects. He has consulted regularly with provincial regulatory agencies, local landowners, and other stakeholder groups.

Mark is a versatile, conservation-focused ecologist with over 18 years in adaptive project management in challenging environments. He is a dedicated learner with a proven record of quickly developing new skills and an excellent writer for both a technical and general audience. He is diplomatic and capable when navigating differing values of multiple stakeholders.

REPRESENTATIVE PROJECTS AND ROLES

Environmental Baseline Surveys, NS, 2022-Present – Project Manager: Completion of environmental baseline surveys for multiple provincial environmental assessments for various wind power projects and quarries. This involves detailed desktop and constraints analyses to determine required field assessments, implementation of all field programs, interpretation and reporting of results, across multiple taxa and habitat types.

Environmental Assessment, Various Projects, 2022-Present – Project Manager: Lead terrestrial baseline reporting and environmental effects chapters for various mine, quarry, and wind projects, as well as other development projects across the maritime provinces (e.g., Walden Quarry Expansion, Six Mile Brook Quarry Expansion, Rhodena Wind Project, Wedgeport Wind Project, Caribou and Wood Islands Ferry Terminal Expansion Projects).

Botanical Surveys, NS, 2022-2024 – Project Manager: Planned and developed botanical survey programs, including species at risk and habitat assessments, for various mine, quarry, solar, and wind projects, as well as other development projects across the maritime provinces (e.g., Walden Quarry Expansion, Six Mile Brook Quarry Expansion, Shaw Sand Pit, Wedgeport Wind Project, Clydesdale Wind Project, Rhodena Wind Project, Wejipek Wind Project, Apitamkiejit Wind Project, Upper Afton Wind Project, New Prospect Wind Project, White Cedar Wind Project, Port Malcolm Solar Project, Caribou and Wood Islands Ferry Terminal Expansion Projects, Sungro Horticuture Peat Harvesting Projects, etc.).

Avian Survey Design and Completion, 2022-2024 – Project Manager: Planned and developed avian survey programs, including species at risk, coastal, migration, nocturnal owl surveys, breeding, and raptor/diurnal watch count surveys, for various mine, quarry, solar, and wind projects, as well as other development projects across the maritime provinces (e.g., Walden Quarry Expansion, Six Mile Brook Quarry Expansion, Shaw Sand Pit, Wedgeport Wind Project, Clydesdale Wind Project, Rhodena Wind Project, Wejipek Wind Project, Apitamkiejit Wind Project, Upper Afton Wind Project, New Prospect Wind Project, White Cedar Wind Project, Port Malcolm Solar Project, Caribou and Wood Islands Ferry Terminal Expansion Projects, Sungro Horticuture Peat Harvesting Projects, etc.).

EDUCATION

- Masters of Science in Forestry, University of New Brunswick, Fredericton, NB (2012)
- Bachelor of Science in Forestry (Major in Forest Management, Minor in Wildlife Ecology), University of New Brunswick, Fredericton, NB (2004)

TRAINING

- Emergency First Response & CPR (2022)
- Wilderness First Responder (2014)

AREAS OF SPECIALIZATION

- Environmental Assessments
- Fish community & habitat assessments
- Fish rescues
- Wetland delineation and functional assessment
- Species at Risk Evaluation
- Flora and Fauna surveys
- Avian surveys
- Public Consultation

RELEVANT EXPERIENCE

Ms. Juurlink is a Senior Environmental Scientist, with the role of Project Manager and the Ecology Lead of Environmental Assessments & Approvals. She is highly skilled at completing ecological habitat assessments via geospatial desktop review (GIS) and implementation of field studies. She has an in-depth knowledge of NS flora and fauna which has provided her with the tools to determine habitat uniqueness and ecological sensitivity.

Before joining Strum, Melanie was the Senior Ecologist at McCallum Environmental Ltd., in NS. In that role, Melanie coordinated all McCallum field biologists required to complete all environmental baseline and ecological inventory programs for Provincial and Federal Environmental Assessment registration. She has been responsible for the implementation of environmental baseline programs in mining, quarry development, and energy sector development projects in advance of environmental assessment registration. In addition, Melanie has been responsible for communicating the results of baseline environmental conditions to industry and project-related stakeholders. Her effective communication skills, broad technical knowledge, and personability have furthered her involvement in public consultation sessions and community engagement.

Melanie held previous positions as the Environmental Specialist and Area Environmental Lead for the Shell/Albian Sands Expansion and the Regulatory and Environmental Specialist for the Canadian Natural Resources, Ltd. both in Fort McMurray, AB. Melanie is a volunteer hike leader and trail steward in the Blue Mountain Birch Cove Lakes Wilderness Area.

REPRESENTATIVE PROJECTS

Environmental Assessment, Clydesdale Ridge Wind Project, NS, 2024 – Project Manager: Completed environmental baseline surveys and Environmental Assessment Registration Document for the Clydesdale Wind Project, consisting of a proposed 18 wind turbine generators and all associated infrastructure. As the Project Manager, Strum implemented all of the field programs, and prepared the EARD for submission to NSECC in August 2024.

EDUCATION

- Masters of Resource and Environmental Management, Dalhousie University, Halifax, NS (2011)
- Bachelor of Science (Advanced Major in Biology & Interdisciplinary Studies in Aquatic Resources), St. Francis Xavier University, Antigonish, NS (2005)

TRAINING

- Standard First Aid, AED, CPR (A) (2023)
- Joint Occupational Health and Safety Committee Level 1 (2023)
- Avian Nest Sweeps & Monitoring (2021)
- Fish Habitat Restoration, In-stream Techniques (2021)
- Fish Habitat Assessments (2019)
- eDNA Methods (2019)
- Freshwater & Diadromous Fishes of New England (2019)
- Field Hike Leader Certification, Basic and Winter Modules, Outdoor Council of Canada (2015 & 2018)
- Wetland Ecosystem Services Protocol (WESP-AC) (2017)
- WHMIS (2017)
- Electrofishing Crew Leader (2015)
- Wetland Delineation Certification (2013)
- Small Vessel Operator Proficiency & Marine Emergency Duties A3 Certified (2006)

Environmental Impact Statement, Wejipek Wind Project, PEI, 2024 – Project Manager: Completed environmental baseline surveys and Environmental Impact Statement document for the Clydesdale Wind Project, consisting of a proposed three wind turbine generators and all associated infrastructure. As the Project Manager, Strum implemented all of the field programs, and prepared the EIS for submission to PEI Energy, Environment and Climate Action.

WESP-AC Functional Assessment Training, MCFT, NS, 2023-2024 – Trainer: Invited by the Maritime College of Forest Technology (MCFT) to lead the Wetland Ecosystem Services Protocol for Atlantic Canada (WESP-AC) training in Amherst, Nova Scotia. Provided training to a multi-disciplinary group of practitioners from all four maritime provinces. Provided training on WESP-AC internally to McCallum Environmental Ltd. and Strum personnel since 2018 as well.

Fish Rescues, NS, 2020-2024 – Project Manager: Completed more than 75 fish rescues in the past four years to support various transportation projects throughout Nova Scotia. Acted as both field crew and Project Manager, depending on the specific Project.

Fish & Fish Habitat Assessment, NS, 2019-2024 – Project Manager: Completed detailed evaluation of effects to fish and fish habitat to support application for Harmful Alteration, Disruption, and Destruction of Fish Habitat for one provincially approved gold project. This involved detailed fish habitat assessment, fish community structure evaluation, effects assessment based on direct impact and flow reduction, and compensation for residual effects.

Herpetology Field Programs – 2015-2024 – Environmental Scientist & Project Manager: Developed and implemented multiple targeted surveys for herpetofauna, specifically wood turtle, bandings turtle, and ribbonsnake, for EAS and development related permitting projects. Completed field programs and regulatory consultation to clearly communicate Project implications of rare species and their habitats.

Environmental Baseline Surveys, NS, 2013-2024 – Project Manager and Environmental Scientist: Completion of environmental baseline surveys for multiple provincial environmental assessments for various wind power projects and quarries. This involves detailed desktop and constraints analyses to determine required field assessments, implementation of all field programs, interpretation and reporting of results, across multiple taxa and habitat types.

Avian Surveys, NS, 2012-2024 – Environmental Scientist: Completion of avian surveys, including baseline studies, post-construction studies and pre-construction nest searches for over ten projects, such as mines, quarries, wind power projects and residential development. Implemented and completed avian surveys from 2015-2018. From 2018-2024, guided implementation of programs and interpretation of results.

Wetland Delineation, Functional Assessments, NS, 2011-2024 – Environmental Scientist & Trainer: Completed wetland delineation and functional assessment for over 1000 wetlands in support of multiple development projects in both permitting and environmental assessments. Instructed wetland delineation training with Fern Hills institute, and internally within both McCallum Environmental Ltd. and Strum Consulting. Wetland delineation and instruction includes teaching botany identification and habitat association, soil ecology, and hydrology.

Lighthouse Trail Re-Route – Botanical Survey – 2023 – Project Manager: Liaised with the prime consultant, Parks Canada, and our field biologists to safely execute a botanical assessment along a proposed re-route of the Lighthouse Trail in Louisbourg, Nova Scotia. The re-route was required due to extensive damage from Hurricane Fiona. Our team provided a report to Parks Canada identifying results of a botanical survey to be used to advise trail re-route design and construction.

Environmental Baseline Surveys, Mining, NS, 2016-2023 – Environmental Scientist & Project Manager: Completion of environmental baseline surveys for the federal and provincial environmental assessment process for proposed development of four separate gold mines in eastern Nova Scotia. This involved collection of baseline data and effects assessment for terrestrial habitats (flora and fauna), avifauna, wetlands, fish and fish habitats, including completion of the Cumulative Effects Assessments for those projects within the federal process.

Baseline Studies, WESP-AC Calibration Study, NS, 2018 – Environmental Scientist: Completed baseline studies on 125 wetlands across the province to implement a new wetland functional assessment technique (WESP-AC) to the Nova Scotian regulatory landscape.

PROFESSIONAL ASSOCIATIONS

- PADI Professional

AREAS OF SPECIALIZATION

- Fish and Fish Habitat
- Fish Rescue
- Freshwater Mussels
- Environmental Monitoring

RELEVANT EXPERIENCE

Ms. Ferrari has been in the environmental consulting industry since June 2020. She primarily specializes in fish and fish habitat sciences. Ms. Ferrari has a range of experience in the planning and implementation of aquatic field programs, as well as experience in regulatory permitting. She has worked as a field biologist responsible for conducting a variety of biophysical assessments including wetland delineation, watercourse delineation, fish habitat surveys, fish collection, benthic invertebrate sampling, periphyton sampling, sediment sampling, fish rescues, turtle surveys, snorkel surveys, water quality sampling, flow monitoring, and brook floater surveys.

EDUCATION

- Bachelor of Science (Biology), Saint Francis Xavier University, Antigonish, NS (2019)

TRAINING

- Intermediate Workplace First Aid Level C CPR & AED (2023)
- WHMIS Certificate (2023)
- PADI Open Water Scuba Diving Instructor (2022)
- Backpack Electrofishing Certificate (2020)
- Pleasure Craft Operator (2020)

REPRESENTATIVE PROJECTS AND ROLES

Fisheries Act Authorization, Elmsdale, NS, 2025 – Aquatic Disciple Lead: Fisheries disciple lead and main author of the Fisheries Act Authorization (FAA).

Fisheries Act Authorization and Request for Review, Upper Fox Island, NS, 2024-2025 – Field Lead and Aquatic Disciple Lead: Acted as a field lead for the submission of both the Request for Review (RfR) and FAA. Ms. Ferrari was the primary author for both the RfR and the FAA.

Fisheries Act Authorization, Fishermans Harbor, NS, 2024 – Field Lead and Aquatic Disciple Lead: Acted as a field lead for a shoreline assessment to prevent erosion during large storm events. Ms. Ferrari was the primary author for the FAA.

Federal Environmental Assessment, Tratalgar, NS, 2024 – Field Technician: Acted as a field technician for a gold mine federal EA in Tratalgar, NS. The scope of work included fish collection, periphyton sampling, eDNA, benthic invertebrate sampling, geomorphological surveys, water quality sampling, moose surveys, flow monitoring, and detailed fish habitat assessment. Ms. Ferrari was the primary author of the baseline report submitted in 2024.

Environmental Assessment, Cook Brook, NS, 2023 – Field Lead: Acted as a field lead for a biophysical and provincial gypsum mine Environmental Assessment. The scope of work included a preliminary bank survey and habitat assessment for brook floaters, detailed habitat assessment, wetland delineation, and fish collection. Ms. Ferrari was the primary author for the biophysical report submitted in 2023.

Biophysical Assessment, Cooks Brook, NS, 2023 – Technician: Acted as a technician for a biophysical report in Cooks Brook, NS. The scope of work included a preliminary bank survey and instream brook floater survey along a portion of the Gays River to identify brook floaters or their habitat.

Federal Environmental Assessment, Sherbrooke, NS, 2023 – Field Technician: Acted as a field technician for a gold mine federal Environmental Assessment in Sherbrooke, NS. The scope of work included fish collection, periphyton sampling, benthic invertebrate sampling, water quality sampling, flow monitoring, and detailed fish habitat assessment. Ms. Ferrari was the primary author of the baseline report submitted within 2023.

Highway Twinning Project, New Glasgow to Antigonish, NS, 2021-2023 – Field Technician: Acted as a field technician for a highway twinning project along Highway 104 from New Glasgow to Antigonish. The scope of work included completing various sized fish rescues, detailed fish habitat assessment, and turtle surveys. Ms. Ferrari was also the primary author of various fish rescue reports.

Environmental Assessment, Goldboro, NS, 2021-2023– Field Technician: Completed field work for a provincial gold mine Environmental Assessment in Goldboro, NS. The scope of work included detailed fish habitat assessment, eDNA, redd surveys, benthic surveys, and fish collection. Ms. Ferrari was the primary author of various baseline reports and supported the submission of the EARD, FAA, Aquatic Effectiveness Monitoring Plan (AEMP), and Offsetting Plan.

Environmental Monitoring, Pickle Lake, ON, 2020-2023 – Environmental Monitor: Acted as an environmental monitor for a 1300 km transmission line project. Completed regulatory advising, spill response, erosion/sediment control, wildlife monitoring, water quality monitoring, and reporting on construction activity.

Fisheries and Oceans Canada (DFO) Request for Review, Halifax, NS, 2022 – Field Technician: Acted as field technician for DFO Request for Review (RfR) to upgrade a boat ramp within the Halifax Harbour. The scope of work included fish collection, shoreline assessment and water quality. Ms. Ferrari was the primary author.

Federal Environmental Assessment, Marinette, NS, 2020– Field Technician: Acted as a field technician for a gold mine federal Environmental Assessment in Marinette, NS. The scope of work included fish collection, eDNA sampling, water quality sampling, flow monitoring, and detailed fish habitat assessment.

AREAS OF SPECIALIZATION

- Statistical and spatial analysis
- Biophysical survey design
- Impacts of climate change on natural systems
- Species conservation
- Effects of disturbance on plant communities

RELEVANT EXPERIENCE

Dr. Emma Davis is a landscape ecologist with an interest in the effects of human disturbance and climate change on plant community dynamics. Emma has significant experience leading field-based research programs and has completed several major projects aimed at understanding how interactions between human activities and natural processes influence forest systems, particularly as it relates to rare and sensitive plant species and communities.

Emma completed her PhD at the University of Guelph in 2018 studying the long-term impacts of climate change on the distribution of alpine treelines in Canada's Rocky Mountain region. Her research involved combining data from a series of field experiments and greenhouse studies with dendrochronology (tree-ring analysis) to understand how soil characteristics, herbivory, and climate determine the ability of trees to establish at the edges of their distributional range.

Following the completion of her PhD, Emma held Postdoctoral Fellowships at the University of Guelph Arboretum and the University of Waterloo, where she worked with a multidisciplinary team of researchers and conservation practitioners to develop skills in conservation planning, remote sensing and spatial modelling. Emma also has led the preparation of provincial species recovery documents (Newfoundland and Labrador) through the coordination of species at risk recovery teams. Throughout her academic and professional career, Emma has developed strong data analysis, visualization, and writing skills, and has enjoyed opportunities to collaborate with individuals from diverse backgrounds and areas of expertise.

REPRESENTATIVE PROJECTS AND ROLES

Renewable Energy and Infrastructure Environmental Assessments, NS (2025-Ongoing) – Project Coordinator and Terrestrial Specialist: Provided writing and editorial support during the preparation of several environmental assessment documents for proposed renewable energy projects and associated infrastructure.

Quality Control/Quality Assurance for Biophysical Field Data Collection, NS (2025-Ongoing) – Project Coordinator and Terrestrial Specialist: Coordinated timely reviews of incoming data from wetland and watercourse field programs to ensure the collection of complete and accurate data.

Species at Risk Recovery Planning, NL (2022-2023) – Ecosystem Management Ecologist: Responsible for drafting species recovery documents for provincially-listed plant species and coordinating species at risk recovery teams. Completed fieldwork and monitoring for plant species at risk, including the implementation of a soil temperature logger monitoring program across sensitive ecosystems in Newfoundland.

Northern Vegetation Change Study, NL (2019-2022) – Postdoctoral Fellow: Collaborated with researchers and conservation practitioners on a major research project northern Labrador, Nunatsiavut. The multidisciplinary study combined the use of observational field data and remote sensing to document and understand the drivers of shrub expansion in Torngat Mountains National Park.

EDUCATION

- Doctor of Philosophy, Department of Geography, Environment & Geomatics, University of Guelph, Guelph, ON (2018). Thesis: An evaluation of constraints to treeline advance across multiple scales in the Canadian Rocky Mountains.
- Master of Science, Department of Geography, Carleton University, Ottawa, ON (2014) Thesis: The influence of vegetation and climate on wildfires in Jasper, Alberta, over the last ~3,500 years.
- Bachelor of Science, Environmental Science (Honours), Mount Allison University, Sackville, NB (2012). Thesis: Dendrochronology in the Canadian Prairies: Evaluating the Usefulness of Shelterbelt Species Now and in the Future.

TRAINING

- St. John's Ambulance First Aid & CPR/AED Level C (2025)

Plant Species at Risk Conservation Projects, ON (2016-2022) – Conservation Intern and Postdoctoral Fellow:

Assisted with seed collection and propagation programs for provincially rare plant species and led the analysis and writing of a provincial tree atlas.

Northern Shorebird Nest Fate Study, NU (2014) – Field Assistant:

Completed nest searches and habitat assessments as part of a long-term shorebird nest fate monitoring study at the remote Canadian Wildlife Service research station on Southampton Island, NU.

Forest Ecology Research Studies, AB, NB, NS, ON, and SK (2010-2018) – Lead Researcher and Field Assistant:

Led and assisted with several field-based research studies focused on interactions between tree growth dynamics, human disturbance, and climate change. Responsibilities included field preparation, supervision and mentorship of junior researchers, data QA/QC and statistical analysis, reporting (peer-reviewed journals and public outlets), and extensive fieldwork in remote locations across Canada.

AREAS OF SPECIALIZATION

- Wetland and Watercourse Assessment
- Old Growth Scoring
- Wildlife Surveying and Assessment
- Bat Call Spectrogram Analysis
- Environmental Data Collection, Analysis, and Reporting

RELEVANT EXPERIENCE

Leah Riehl joined the Strum team in 2023 as an Environmental Scientist with a specialization in environmental data collection and analysis. While studying at Saint Mary's University (SMU), Leah majored in environmental science and gained experience in a wide variety of academic disciplines including geology, geography, physics, chemistry, and biology. She is an experienced field scientist and has an in-depth knowledge of various on the ground field protocols.

EDUCATION

- Bachelor of Science, Major in Environmental Science, Saint Mary's University, Halifax, NS (2023)

TRAINING

- Pleasure Craft Operator License, Transport Canada (2021)
- WHIMIS (2023)
- Bear Awareness Training, Worksite Safety (2023)
- Wetland Ecosystem Services Protocol for Atlantic Canada (WESPAC), Maritime College of Forest Technology (2023)
- Trailer/Towing Training (2023)
- Utility Vehicle Training, Canada Safety Council (2023)
- Emergency First Aid & CPR/AED Level C, Canadian Red Cross (2026)

Leah completed her Bachelor of Science at Saint Mary's University in 2023. During her studies, Leah specialized in environmental management, conservation, and remediation. Through completion of academic assignments throughout her degree, Leah has designed a watershed management plan for a local watershed, a remediation plan for an urban park in Halifax, and a habitat model for an endangered lichen species. She also became familiar with ArcGIS, QGIS, and the Forest Ecosystem Classification system, and gained baseline knowledge of species identification with a focus on plants and herpetofauna of Nova Scotia.

Leah also completed the Cooperative Education program during her undergraduate degree at SMU, gaining professional experience through three summer work placements at the Discovery Centre, the Mersey Tobeatic Research Institute (MTRI), and Nature Conservancy Canada (NCC), respectively. Through these placements, Leah gained experience in environmental education, species at risk research and management, protected areas management, and invasive species management.

At MTRI, Leah planned and participated in field surveys for species at risk including Blanding's turtles, Eastern ribbonsnakes, and various bat species. Leah became experienced with turtle nesting surveys, snake and turtle visual surveys, bat roost surveys, radio tracking, and acoustic monitoring. At NCC, Leah gained experience writing reports summarizing conditions of conserved areas and using ArcGIS to create maps of protected areas. She also gained further experience with species surveys by conducting surveys for both invasive and at risk species.

At Strum, Leah is active in conducting field work to support environmental assessments, including but not limited to wetland delineations, watercourse assessments, old growth scoring, rare plant surveys, bird surveys, acoustic monitoring, pellet group inventory assessments, and wildlife surveys. She is also experienced in data compilation, data analysis, and report preparation and is trained in the operation of utility vehicles, trailer towing, and WESPAC assessment. She has participated in work across large projects and works closely with senior staff to prepare reports and regulatory submissions.

REPRESENTATIVE PROJECTS AND ROLES

Wind Power Environmental Assessments, 2023- Present: Conducted field work and data compilation and analysis to support environmental assessments for a number of 100MW+ wind farms across Nova Scotia including but not limited to wetland and watercourse assessments, old growth scoring, avian and bat acoustic monitoring, rare plant surveys, and specialized species surveys. Prepared, interpreted, and organized field data. Prepared various environmental assessment documents, including desktop reviews, field methodologies, and effects assessments.

Post-Approval Work, NS, 2023-Present – Junior Environmental Scientist: Conducted data compilation and reports for various wind farm projects to fulfill post-approval conditions such as additional wetland and watercourse data collection and post-approval bat monitoring.

AREAS OF SPECIALIZATION

- Environmental Assessment
- Environmental Approvals & Permitting
- Industrial Approvals
- Management & Monitoring Planning
- Wildlife, Wetland, & Watercourse Assessments
- Bat Assessments

RELEVANT EXPERIENCE

Ms. Eichinger has worked across a variety of roles, from field intern to project manager, focusing on energy projects within Western and Atlantic Canada. She is active in the development and coordination of environmental assessments/evaluations, industrial approvals, environmental approvals/permitting, along with baseline and monitoring programs. Lyndsay has valued experience with and knowledge of provincial and federal regulations, allowing her to provide advisory services for various projects across jurisdictions. She is also responsible for post-approval regulatory compliance and associated management and monitoring planning for both small-scale and large-scale projects.

In addition, Lyndsay has over five years of experience conducting, analyzing, and administering bat assessments and field programs, most notably associated with wind development. Her expertise includes acoustic monitoring, habitat assessments, and mortality monitoring planning for projects across Atlantic Canada. She brings value through the characterization of project risks in relation to bats and advises on mitigation strategies and regulatory requirements.

Ms. Eichinger first joined the Strum team in 2020 as an Environmental Intern, while working towards her Masters of Resource and Environmental Management degree at Dalhousie. While studying at Dalhousie, Lyndsay specialized in remediation, environmental assessment, and natural resource management. Lyndsay also obtained her Bachelor of Science degree in 2019 from the University of British Columbia where she specialized in Earth and Environmental Science with a minor in Economics.

During her graduate studies, Lyndsay researched the Boat Harbor Remediation Project, producing a technical review paper evaluating the cost-effectiveness of the different remedial components and technologies considered by the project. This paper has since been published in the journal Remediation titled: Review of remedial options for the Boat Harbour remediation project in Nova Scotia, Canada.

Lyndsay held a previous position with RAM Environmental Response as a HAZMAT Responder based in the BC interior. Her role was fast-paced and multidisciplinary, working in tandem with senior management on emergency response planning and remediation teams on site. Lyndsay has responded to an array of emergency situations involving dangerous goods, such as train derailments and fuel spills, all requiring coordination between clients, contractors, first responders, and government parties. She has a strong background in safety protocols, erosion control implementation, response tactics, and emergency remediation measures for a variety of contaminants. Lyndsay is well practiced in remote travel along with ATV, snowmobile, and 4x4 use.

EDUCATION

- Masters of Resource and Environmental Management (MREM) - Dalhousie University, Halifax, NS (2021)
- Bachelor of Science - University of British Columbia (2019)

TRAINING

- Standard First Aid (2025)
- ATV Certification (2022)
- RPAS Pilot Certification (2022)
- BICO – Search and Rescue Program (2022)
- Wetland Delineation Certification (2022)
- Electrofishing Certification (2021)
- Stream Gauging Training from UBC (2019).
- Environmental Impact Assessment Certificate received from the Centre for Environmental Assessment Research at UBC (2019).
- Derailment Response - CP Railway (2018)
- Railway Safety Training (2018)

REPRESENTATIVE PROJECTS AND ROLES

Federal Initial Project Description, Flipi Gas-Fired Generation Project, AB, 2025 – Project Manager, Environmental Scientist: Led the development and submission of a federal Initial Project Description to the Impact Assessment Agency of Canada. Coordinated with multidisciplinary teams, clients, and liaised with regulators to streamline submission process.

Environmental Evaluation, Various Natural Gas Power Plants, AB, 2025 – Project Manager, Environmental Scientist: Led provincial environmental evaluations for multiple natural gas power facilities across Alberta, overseeing baseline studies, impact assessments, and subsequent environmental permitting. Delivered comprehensive reports aligned with provincial regulatory frameworks and facilitated successful project permitting.

Industrial Approval Applications, Various Natural Gas Power Plants, AB, 2025 – Project Manager, Environmental Scientist: Managed the preparation and submission of industrial approval applications for several natural gas power plants, ensuring compliance with Alberta Environment and Protected Areas requirements. Coordinated multidisciplinary teams and liaised with regulators to streamline approval timelines.

Industrial Approval Application, Pyrolysis Facility, AB, 2025 – Project Manager, Environmental Scientist: Directed the regulatory strategy and industrial approval application for a pyrolysis facility in Alberta. Coordinated with teams on air emissions modeling, waste management planning, and regulatory engagement.

Environmental Assessment, Nova Sustainable Fuels Renewable Energy Park Project, NS, 2025 – Project Manager, Environmental Scientist: Completed reporting requirements and environmental assessments for the submission of an EA Registration Document for a sustainable aviation fuel facility located in Goldboro, NS. This was the first sustainable aviation facility to be submitted in Nova Scotia.

Environmental Evaluation, Various Solar Projects, AB, 2024 & 2025 – Project Manager, Environmental Scientist: Oversaw environmental evaluations for multiple solar energy developments across Alberta, including site selection, wildlife and vegetation assessments, and regulatory screening. Delivered tailored mitigation strategies and coordinated with provincial agencies to support efficient permitting and sustainable project design.

Post-Approval Work, EverWind Point Tupper Green Hydrogen/Ammonia Project Phase 1, NS, 2023-2025 – Project Manager, Environmental Scientist: On-going post-approval work (following approval of the EA Registration Document) including the development of an industrial approval, environmental management planning, and monitoring plans. These plans are developed to avoid/mitigate potential impacts to nearby environmental and residential receptors throughout the lifespan of the Project.

Environmental Assessment, EverWind Point Tupper Green Hydrogen/Ammonia Project - Phase 1, NS, 2022 – Environmental Scientist: Completed field studies and key reporting requirements for the submission of an EA Registration Document for a green ammonia/hydrogen facility located in Cape Breton, NS. This was the first green ammonia/hydrogen facility to be approved in both Nova Scotia and Canada.

Post-Approval Work, Various Wind Developments, 2023-2025 – Project Manager, Environmental Scientist: On-going post-approval work for various wind projects (following approval of the EA Registration Document) including the development of environmental management and monitoring plans. These plans are developed to avoid/mitigate potential impacts to nearby environmental and residential receptors throughout the lifespan of the Project.

Environmental Assessment, Various Wind Developments, 2022-2025 – Project Manager, Environmental Scientist: Providing project coordination and report writing on several 100 MW+ wind farms in Nova Scotia.

Environmental Permitting, Melford Atlantic Gateway Project, NS, 2020-2025 – Project Manager, Environmental Scientist: Completed various key reporting, permitting, and research requirements for the marine terminal and associated railway located in Guysborough, Nova Scotia.

Environmental Assessment Registration, Transmission Line, NL, 2022 – Junior Environmental Professional: Completed reporting requirements for the submission of an EA Registration Document and associated Environmental Protection Plan for a transmission line decommissioning project located in Newfoundland and Labrador.

Watercourse Alteration Approval and Fish Surveys, NS, 2021 – Junior Environmental Professional: Conducted electrofishing / fish salvage for an emergency watercourse alteration along a section of railway. This involved the capture, identification, documentation, and release of fish from the impacted section of the watercourse.

PROFESSIONAL ASSOCIATIONS

- Association of Professional Engineers of Nova Scotia

AREAS OF SPECIALIZATION

- Industrial Approvals
- Environmental Approvals
- Hydrology/Hydrogeology
- Water Treatment
- Climate Change and GHG Assessments
- Dangerous Goods Assessments

RELEVANT EXPERIENCE

Mr. Gascon joined the Strum team in 2021 and leads a team with the Environmental Assessment and Approvals Group. Mr. Gascon is experienced in project management, engineering design, environmental monitoring, groundwater assessments, hazard assessments, environmental assessments, project reporting, and regulatory compliance.

Mr. Gascon has worked in various roles, from field technician to project manager, on numerous projects throughout Atlantic Canada, including various Industrial Approval applications, renewals, and amendments, dangerous goods permitting, and environmental monitoring. Additionally, he has valuable experience developing potable groundwater supplies, evaluating and treating water quality issues, and reviewing factors contributing to groundwater resource degradation at residential sites. His responsibilities lie in managing and coordinating these projects, completing various field programs, collecting, compiling, and analyzing data, developing mitigative measures/plans, and preparing reports and related regulatory paperwork.

More recently, Mr. Gascon has been developing and implementing Environmental Management Plans for a variety of small- and large-scale projects, including environmental monitoring and compliance components for groundwater, surface water, air quality, soil quality, erosion and sedimentation controls, vegetation/wildlife management, hazardous and non-hazardous waste management, spill response, remediation, and decommissioning works.

Mr. Gascon previously worked as a Research Assistant with the Centre for Water Resources Studies. His role involved researching the management and disposal options for municipal drinking water treatment plant waste residuals in the Northwest Territories.

Prior to completing his bachelor's degree, Mr. Gascon was a Mechanical Designer, developing and designing 3D renderings for heavy-duty industrial enclosures. Tasks included designing structures with computer-aided design software, formatting designs compatible with the water jet cutter, configuring assembly plans, and inspecting units for fabrication and assembly deficiencies.

REPRESENTATIVE PROJECTS AND ROLES

Environmental Assessment, Simply Blue Group's Green Hydrogen to SAF Project, NS, 2024-Present –

Environmental Engineer: On-going environmental assessment work (development of the EA Registration Document), including the development of technical and environmental component studies. Involved in coordinating the environmental considerations for the Pre-FEED.

Post-Approval Work, EverWind Point Tupper Green Hydrogen/Ammonia Project Phase 1, NS, 2023-Present –

Environmental Engineer: On-going post-approval work (following approval of the EA Registration Document), including the development of environmental management and monitoring plans. These plans are developed to avoid/mitigate potential impacts to nearby environmental and residential receptors throughout the project lifespan.

EDUCATION

- Bachelor of Engineering (Environmental), Dalhousie University, Halifax, NS (2020)
- Civil/Mining Technician, Collège Boréal, Sudbury, ON (2010)

TRAINING

- Wilderness First Aid (2022)
- Standard First Aid & CPR (2021)
- WHMIS (2021)
- Confined Spaces (2021)
- Excavation and Trenching (2020)
- Pleasure Craft Operator License (2002)

Greenhouse Gas Assessments, NS and NL, 2022-Present – Environmental Engineer – Complete a greenhouse gas inventory for various projects across the Atlantic provinces. Quantifying the GHG generation/sinking potential of a project is becoming a requirement for regulatory, financial, and incentivized institutions. Understanding the GHG contributions from projects increases the requirements to offset and adapt to meet federal and provincial net-zero goals.

Waste Transfer Station Permitting, NS, 2022-Present – Intermediate Engineer: Complete regulatory outreach for the permitting of new waste transfer stations. The permitting process requires detailed engineering plans and specifications, contingency planning, air quality, noise, surface water, and groundwater management and monitoring.

Pyrolysis and Biochar Facilities, NS, 2021-Present – Intermediate Engineer: Complete field studies and key reporting requirements for Environmental Assessment and Industrial Approvals. The permitting process requires detailed engineering plans and specifications, contingency planning, air quality and dispersion modelling, and surface water and groundwater management and monitoring.

Compost Facility Environmental Monitoring Program, NS, 2021-Present – Intermediate Engineer: Monitoring groundwater and surface water sampling, data compilation, data analysis, and regulatory reporting. Prepared various approval amendment applications for submission to NSECC, direct correspondence with NSECC, and streamlined the monitoring and reporting program.

Wind Power Environmental Assessments, NS, 2021-Present – Intermediate Engineer: Conducted watercourse, wetland, fish/fish habitat, wildlife and avian assessments required, and environmental assessment reporting. Developed greenhouse gas and climate change assessment criteria for quantifying the effects or impacts of the Projects on the environment and climate change on the Projects.

Groundwater Geothermal Heating and Cooling System Review and Permitting, NS, 2021-Present – Intermediate Engineer: Withdrawal flow monitoring, water level monitoring, equipment inspection, water quality sampling, data compilation, data analysis, and regulatory reporting.

Municipal Compost Facility Leachate Handling System, NS, 2021-Present – Intermediate Engineer: Design, specification, and industrial approval amendment.

Level I and II Groundwater Assessments, NS, 2021-Present – Intermediate Engineer: Supervise well installation, pump testing (i.e., step and constant), sampling, analysis of aquifer characteristics, groundwater modelling, and regulatory reporting.

Groundwater Geothermal Cooling Systems, NS, 2021-Present – Intermediate Engineer: Withdrawal flow monitoring, water level monitoring, equipment inspection, water quality sampling, data compilation, data analysis, and regulatory reporting.

Environmental Assessment, EverWind Point Tupper Green Hydrogen/Ammonia Project, NS – Phase 1, NS, 2022 – Environmental Engineer: Completed field studies and key reporting requirements for the submission of an EA Registration Document for a green ammonia/hydrogen facility. This was the first green ammonia/hydrogen facility to be approved in both Nova Scotia and Canada.

Production Field Centre Hazardous Materials Assessment, NS, 2021 – Junior Engineer: Hazardous Materials inventory, coordinate sampling, data analysis, and reporting.

Greenhouse Gas Inventory Audit, NS, 2021 – Junior Engineer: Greenhouse Gas auditing for Fisheries and Oceans Canada (DFO) application.

Air Quality Improvement Design, Labrador, NL, 2021 – Junior Engineer: Design, specification, stack testing, data analysis, and construction of ventilation improvements.

Drinking and Wastewater Treatment Plant System Assessments, NS, 2021 – Junior Engineer: Assess water and wastewater infrastructure, establish an asset inventory, and reporting.

Municipal Groundwater Withdrawal Compliance, NS, 2021 – Junior Engineer: Review pumping rates and withdrawal volumes, spatial interferences, sustainability concerns, data analysis, and regulatory compliance.

Registered Potable Groundwater Supply Assessment, NS, 2021 – Junior Engineer: Review design specifications, well logs, water quality, data compilation, data analysis, and regulatory compliance.

PROFESSIONAL ASSOCIATIONS

- Association of Professional Geoscientists of Nova Scotia (member-in-training)
- Eco Canada (Environmental Professional in-training)

AREAS OF SPECIALIZATION

- Wetland and Watercourse Assessment and Delineations
- Wildlife Surveys
- Surface and Groundwater
- Climate Change and GHG Assessments
- Industrial Approvals
- Environmental Approvals

RELEVANT EXPERIENCE

Mr. Scott joined the Strum team in 2022 and is working as a Junior Environmental Scientist with the Environmental Assessment and Approvals Group. Mr. Scott is experienced in many components of Environmental Assessments, including field surveys, delineations, avian radar analysis, wildlife acoustic analysis, and GHG quantification. In an industrial setting, Mr. Scott has experience managing projects and ensuring regulatory compliance and successful approvals. Mr. Scott is experienced in groundwater monitoring, groundwater development, sampling, and conducting aquifer testing and interpreting results.

Mr. Scott has completed fieldwork and report writing to support wetland permitting, Environmental Management Plans and Environmental Assessments for numerous projects across Nova Scotia. Additionally, Mr. Scott has been involved in fieldwork, report writing, and analysis concerning projects throughout the province relating to Level I/II Groundwater Assessments for Subdivisions, groundwater withdrawal approvals, and groundwater monitoring plan programs.

REPRESENTATIVE PROJECTS AND ROLES

Municipal Groundwater Supply Assessment, NS, 2023 – Junior Environmental Scientist: Worked with a team of groundwater experts to analyze well logs, available pump tests and well chemistry data to inform municipal planning around groundwater supply development. This assessment involved determining the depth and stratification of sediments, yields and water quality to understand the yield and safety of a potential groundwater supply.

Groundwater Monitoring Program, Canso, NS, 2023 – Junior Environmental Scientist: Ongoing groundwater monitoring work (following approval of the groundwater monitoring plan), including developing groundwater wells, groundwater sampling, aquifer testing and analysis. The purpose of the monitoring plan is to avoid/mitigate potential impacts to nearby environmental receptors throughout the lifespan of the Project.

Greenhouse Gas Inventories, NS, 2023 – Present – Junior Environmental Scientist: Experienced in conducting direct and indirect GHG emission inventories to quantify large-scale industrial impacts and identify areas for mitigation.

Post-Approval Work, Point Tupper Green Hydrogen/Ammonia Project, NS – Phase 1, NS, 2023 – Junior Environmental Scientist: Development of the groundwater monitoring plan for the hydrogen/ammonia industrial facility as required following the EA approval. Completed fieldwork to support surface water monitoring.

EDUCATION

- Bachelor of Science (Environmental Science), Saint Mary's University, Halifax, NS (2022)

TRAINING

- Wetland Delineation and Classification Training (2023) – Fern Hill Institution of Plant Classification
- Wetland Ecosystem Services Protocol Atlantic Canada (WESP-AC) Training (2023) – Maritime College of Forestry Technology
- Backpack Electrofishing Training (2023) – Maritime College of Forestry Technology
- Standard First Aid Level C CPR & AED (2022) – St John's Ambulance
- ATV Training Course (2022) – Canadian Safety Council
- Pilot Certificate – Small Remotely Piloted Aircraft System (RPAS), Visual line-of-sight (VLOS) (2022) – Transports Canada

Wetland Carbon Sequestration, NS, 2023 – Present – Junior Environmental Scientist: Designing methods and procedures for fieldwork and subsequent analysis to quantify carbon stored in wetland soils.

Wetland Delineation and Permitting, NS, 2023 – Present – Junior Environmental Scientist: Completed wetland delineations, functional assessments, and permitting applications for pre-construction wetland alterations.

Groundwater Geothermal Heating and Cooling Systems Review and Permitting, NS, 2023 – Present – Junior Environmental Scientist: Withdrawal flow monitoring, water level monitoring, equipment inspection, water quality sampling, data compilation, data analysis, and regulatory reporting.

Nesting Bird Searches, NS, 2023 – Junior Environmental Scientist: Surveyed areas pre-construction for the presence of nesting bird activity. Collected field data related to observations and flagged off buffer areas surrounding nesting bird species.

Wind Power Environmental Assessments, NS, 2022 – Present – Junior Environmental Scientist: Conducted watercourse, wetland, fish/fish habitat, wildlife and avian assessments, and environmental assessment reporting. Quantified greenhouse gas and climate change impacts of the projects on the environment.

Level I/II Groundwater Assessments, NS, 2022—Present—Junior Environmental Scientist: Completed desktop assessments to determine the viability of sustainable groundwater withdrawals. Conducted drilling and pump test supervision. Sampled water to compare with drinking water guidelines and analyzed aquifer test data to determine adequate safe yields for groundwater users.

Radar and Avian Acoustic Assessments NS, 2022 – Present – Junior Environmental Scientist: Built and ran remote radar and acoustic monitor assemblies to record the passage of avian migrant species. The radar and acoustic data were processed and analyzed to determine the patterns of avian migration. The acoustics were analyzed with machine-learning software and manually verified for accuracy.

Various Management and Leadership Roles, NS, 2018- 2022 – Self-Employed: Competed internationally for Canada in Sprint Kayaking. This required creating sponsorship proposals, developing relationships with sponsors and stakeholders, and managing travel and shipping logistics. Part of this role required public speaking engagements, client receptions, and providing mentorship.

AREAS OF SPECIALIZATION

- Data Management & Analysis
- Environmental Assessment
- Environmental Reporting
- Task Coordination & Management

RELEVANT EXPERIENCE

Ms. Nguyen joined the Strum team in 2023 as a Junior Environmental Scientist upon completing her coursework for her Resource and Environmental Management degree at Dalhousie University. While at Dalhousie, Ms. Nguyen engaged in a variety of interdisciplinary areas of natural resource management, including nature-based solutions, socio-ecological studies, and environmental impact assessment. Her diverse professional and academic experiences demonstrate strong adaptability to different fields and a wide breadth of skill sets.

During her graduate studies, Polly focused on improving her strengths in socio-ecological studies while fostering her interests in natural resources management and field-based assessment. She worked as a Knowledge Mobilization Assistant for the Natural Sciences and Engineering Research Council (NSERC) – ResNet organization where she participated in researching and drafting policy briefs on climate sustainability and resiliency within the landscape of the Bay of Fundy dykelands. She engaged in various academic opportunities to build upon her experiences in natural resource management and assessment, such as drafting a policy commentary on the lack of diverse socio-economic factors within the environmental impact assessment and collaborating with multidisciplinary teams to contribute to local issues. As a culmination of her strengths and interests, Polly researched on the interconnected relationship between intersectionality and mental health in influencing environmental participation in the climate movement within Nova Scotia for her final MREM Research Project.

To further build her field-based experiences, Polly worked as a teaching assistant for introductory and advanced environmental science courses, including Field Methods in Environmental Science where Polly led field programs and guided university students with scientific field notes and report writing. Polly also completed an intensive field course during her Master's degree where she conducted forestry composition surveys, CABIN protocols, avian surveys, benthic invertebrates surveys, herpetofauna surveys, nocturnal invertebrates surveys, data analysis, and report writing. Alongside her MREM internship with NSERC ResNet, Polly collaborated with natural sciences scholars on the completion of a decadal review of natural resources and social sciences for the International Association for Society and Natural Resources (IASNR) where she liaised with editors on chapters completion and compiled qualitative data on trends within social and natural resources for the introductory chapter. Through these experiences, Polly has gained experience in adapting her skills to a diverse range of experiences and further improving her skill sets.

Polly is active in conducting environmental assessments, wetland delineations, watercourse assessments, old-growth forest surveys, avian surveys, and other ecological studies. She has experience in utilization of specialized monitoring equipment and data analysis, such as avian acoustic monitor, trail cameras, and ambient noise monitors. She is knowledgeable with provincial and federal regulations and works closely with senior staff and field leads in conducting significant fieldwork and preparing reports.

EDUCATION

- Master of Resource and Environmental Management (MREM) - Dalhousie University, Halifax, NS (2023)
- Bachelor of Arts, Major in International Relations and Economics – Boston University (2021)

TRAINING

- UTV Certification – Canada Safety Council (2023)
- Workplace First Aid & CPR/AED – (2023)
- WHMIS (2023)
- Trailer training (2023)
- Bear Awareness (2023)
- Wetland Ecosystem Services Protocol for Atlantic Canada Training (2024)
- Wetland Delineation Training (2024)

REPRESENTATIVE PROJECTS AND ROLES

Wind Power Environmental Assessments, NS, 2023-Present – Environmental Scientist: Conduct field work on several 100 MW+ wind farms in Nova Scotia, including wetland, watercourse, fish and fish habitat, old-growth, avian, avian radar, bat, wildlife, flora, and lichen surveys. Prepared, reviewed, and organized field data using several methods of collection. Inventoried and configured specialized monitoring gears, such as trail cameras and acoustic monitors, and regularly performed maintenance checks. Prepared EA related documents, including methodologies, effects assessments, and desktop reviews.

Radar and Acoustic Assessment, NS, 2023-Present – Environmental Scientist: Conduct radar analysis on a specialized program to collect avifauna presence on project sites. Conducted quantitative analysis on processed radar and acoustic data to support technical reports on avifauna presence and remote sensing. Lead report coordination and completion of these technical reports for wind projects and other relevant projects.

Post-Approval Works, NS, 2023-Present – Junior Environmental Scientist: Conduct data compilation and reports for various wind farm projects, such as Goose Harbour Lake Wind Farm, Mersey Wind Farm, and Weavers Wind Farm, to fulfill post-approval conditions, such as the creation of Wildlife Management Plans, Contingency Plans, Baseline Noise Monitoring, and Watercourse Alteration applications.

Environmental Noise Measurement, NS, 2023-Present – Junior Environmental Scientist: Configure noise monitors with correct data collection settings prior to field deployment. Initiated noise monitoring deployment for various projects, including the Mersey Wind Farm Project and EverWind Point Tupper Green Hydrogen/Ammonia Project, and compiled data for data analysis and completion of noise monitoring plans. Initiated proposals for baseline noise monitoring programs with appropriate field schedules, required equipment, and budget calculations. Complete a standard operating procedure for deployment procedures, data analysis, and report compilation.

Avian Surveys, NS, 2023-Present – Junior Environmental Scientist: Conducted diurnal watch counts, breeding bird surveys and nightjar surveys for various wind projects, including Mersey Wind Farm Project and Goose Harbour Lake Wind Farm Project.

Orbital Marine Tidal Project, NS, 2023 – Junior Environmental Scientist: Completed desktop reviews and analysis on ambient noise and environmental effects of tidal turbines on marine species within the Minas Passage of the Bay of Fundy. Helped completed a supplemental information report to be sent to relevant regulatory agencies.

Urban Nature and Infrastructure in the Face of Increasing Storm Events 2022 – MREM Tri-course Project: Worked on a multi-disciplinary team to address the biophysical, environmental law and policy, and sociopolitical challenges of urban planning and the incorporation of urban nature in the face of increasing severe storms in Nova Scotia. This involved research into the interconnected relationship between urban trees and utility infrastructure, relevant regulatory bodies and policies, and recommendations into establishing nature-based solutions and smart urban forest management within HRM and the province.

AREAS OF SPECIALIZATION

- Forest management and characterization
- Environmental and carbon modelling
- Urban forest assessment
- Stakeholder engagement
- Hydrologic assessment and modelling

RELEVANT EXPERIENCE

Dr. Foster is an environmental scientist with a special interest in forests, their management, and how people relate to them. More broadly, he is interested in natural resource management and how resources can be utilized sustainably. He has experience in a variety of fieldwork and teaches field work planning, methods, and reporting to undergraduate students at Saint Mary's University.

Dr. Foster completed his PhD in 2024, researching the relationship between forest management and water treatability for potable water supplies. Specifically, his research examined how timber harvesting can be used to reduce watershed dissolved organic carbon (DOC) production to reduce the chemical and financial cost of water treatment in the face of continual and concerning increases in DOC. This study resulted in academic publications on its findings, and forest management recommendations to the region's water utility.

Before this research, David worked for two years as a research associate at Dalhousie University, studying various urban forest and non-urban forest matters. In addition to a contracted characterization of Halifax Regional Municipality's (HRM), urban forest, during this time, he also served as research associate for Prof. William Lahey during the Nova Scotia Independent Review of Forest Practices. He contributed research services, assisted with logistics, and provided writing input, including a report on the history of forest practices review. During this process, he had the opportunity to hear a diverse range of perspectives from stakeholders with contrasting perspectives on natural resource usage, helping to develop an understanding of what is at stake in the management of the natural environment.

REPRESENTATIVE PROJECTS AND ROLES

Wind Power and Infrastructure Environmental Assessments, NS (2024-Ongoing) – Environmental Scientist:

Supporting writing and editing several sections of a variety of environmental assessment for proposed wind farms and associated infrastructure. Contributions in several biophysical and socioeconomic sections, demonstrating a breadth in competencies related to communicating the findings of environmental assessment. Includes writing the terrestrial flora, fauna, and habitat sections of the recently approved Rhodena Wind Project in Cape Breton, NS, and the same sections plus human health effects and effects of the environment on the undertaking for the recently approved Melvin Lake Wind Project in Halifax Regional Municipality and East Hants, NS.

Navigating the Social Acceptability of Forest Biomass Utilization, NS (2024-ongoing) – Environmental Scientist:

Working with a client in the forest biomass utilization industry to help understand the aspects that contribute to the social acceptability of forest biomass usage in an evolving economy and modern society. Collaborating to help establish a roadmap for future entrants into the market to better understand the landscape and plan for successful development of projects that contribute an economy that makes sustainable use of Nova Scotia's natural resources.

EDUCATION

- Doctor of Philosophy, Interdisciplinary PhD Program, Dalhousie University, Halifax, NS (2024). Thesis: Mitigating forested water supply carbon loading through timber harvesting.
- Master of Resource and Environmental Management, Dalhousie University, Halifax, NS (2016). Report: Location matters: the importance of tree placement to urban forest values.
- Bachelor of Science, Combined Honours in Biology and Sustainability, Dalhousie University, Halifax, NS (2014). Thesis: Strategic environmental assessment of changes in Bill C-45 to the Navigable Waters Protection Act and potential effects of environmental protection in Canada.

TRAINING

- Forest Ecosystem Classification qualified (NS, 2024)
- St. John's Ambulance First Aid & CPR/AED Level C (2024)
- Environmental Impact Assessment certificate (2014)

Crown Land Forest Stakeholder Engagement, NS (2023-Ongoing) – Chair/Facilitator: Work with the NS Natural Resources and Renewables as Chair of the Nova Scotia Western Region Crown Land Stakeholder Interaction Committee (WRSIC). This committee is comprised of diverse stakeholders that come together to learn about and contribute to the management of public forests in Nova Scotia. Stakeholders include representatives from industry (mills and silvicultural contractors), Indigenous groups with a specific environmental mandate, NGOs including recreationalist and research groups, elected members of local government, private forest landowners, and more. The group meets at least twice a year to receive updates and provide input on public forest management policy and practice, and to review harvest proposals.

Pockwock Watershed Carbon Loading Study, NS (2018-2024) – PhD Candidate/Lead Researcher: Completed extensive study of the Pockwock watershed, source of water for more than 1/5th of Nova Scotians. Led three summers of fieldwork with research assistants to characterize forest composition, determine hydrologic carbon export, and model watershed hydrology. Wrote custom forest management model and novel implementation of Natural Resources Canada's Carbon Budget Model of the Canadian Forest Sector (CBM-CFS3) for use in a programming environment (R). Research was conducted in partnership through a pan-Canadian research network (the forWater network) including other researchers, forest regulators, the regional water utility, forest managers, forestry contractors, ENGOs, and more. He coordinated with diverse stakeholders to ensure that forest management within the watershed during the study period met research objectives and was properly implemented and characterized and met the research goals of the network.

Community Greening Program, NS (2013-2017) – Coordinator: Developed and implemented a program of urban green space appreciation, education, and improvement. Creating a program of the Sierra Club Canada Foundation Atlantic Canada Chapter focused on urban green spaces, worked with a diverse range of stakeholders to plan, fund, and carry out urban greening initiatives in HRM, including numerous tree plantings. This required working with local government to obtain permission and support for initiatives, members of the public to gain support and to solicit for participation in local events, and business and organizations to find and otherwise support initiatives. These efforts led to planting over 2,700 trees in HRM and establishing the municipality's first publicly hosted community urban orchard.

AREAS OF SPECIALIZATION

- Environmental Approvals
- Wetland and Watercourse Assessment and Delineations
- Wildlife Surveys
- Geospatial Data Analysis
- Wetland Permitting

RELEVANT EXPERIENCE

Emma Posluns is a Project Manager with the Environmental Assessment & Approvals Group, bringing nine years of experience in the field of environmental science. Her expertise spans proposal development, client engagement, field program coordination and execution. She has led and conducted a variety of wildlife surveys including wetland and watercourse surveys, winter transect surveys, avifauna assessments, botanical surveys, and species at risk surveys. Emma also has strong proficiency in geospatial data management and analysis.

In her career, Ms. Posluns has overseen the writing and submission of wetland permitting documentation, Environmental Management Plans, and provincial Environmental Assessments. She plays a key role in leading both terrestrial and aquatic biophysical component studies. She has planned and coordinated multi-team fieldwork across large projects and is knowledgeable in municipal, provincial and federal permitting and approvals processes.

REPRESENTATIVE PROJECTS AND ROLES

Wind Power Environmental Assessments, Multiple Locations, NS, 2025-Present – Project Manager: Providing project management, coordination of field work on several 100 MW+ wind farms. Coordinating the completion of field work, communicating with clients, reviewing and organizing field data. Ensuring the smooth transition from environmental assessment to project completion.

Antrim Gypsum Mine, Antrim, NS, 2022-Present – Project Coordinator: Coordinated multiple teams of field crew to conduct terrestrial and aquatic programs, including wetlands, watercourses, fishing, avifauna, lichenology, botany and habitat studies. Communicated with the client about timelines, project tasks, team safety, budgets, and field results. Answered questions and provided information to the public at a project open house. Organized the compilation and writing of four Environmental Assessment Registration Document (EARD) chapters by staff members. Supported the successful completion of an EARD. Continual support for the management of Species at Risk on the site, regulator communication, and evolving project activities.

Greenwood Wood Turtle Assessment, Greenwood, NS, 2024 – Project Manager: Facilitated a wood turtle assessment at the army base in Greenwood, requiring coordinating safety and background checks for all staff. Ensured safety and efficiency during a multi-week field assessment project. Communicated field results and updates to all stakeholders.

Six Mile Brook Pit Expansion EA Project, Pictou County, NS, 2023 – Project Manager: Coordinated multi-crew field work for various biophysical studies including wetlands, watercourses, fish and fish habitat, lichens, botany, and terrestrial habitat. Lead the compilation and writing of five reports to support the successful submission of an EARD. Successfully communicated with the client and provincial government to ensure environmental regulations followed.

EDUCATION

- Master of Science (Environmental Science), Memorial University of Newfoundland and Labrador (2013)
- Bachelor of Science (Geography), University of Victoria, Victoria, BC (2009)

TRAINING

- Watercourse Identification (2019)
- Technical Writing (2019)
- Backpack Electrofishing Certification (2018)
- At-Risk Landbird Identification Workshop (2018)
- Standard First Aid Level C CPR & AED – St John's Ambulance (2023)
- Wildlife Awareness Training (2015)
- WHMIS (2015)
- Geographic Information System (GIS) Training ESRI (2013)
- Facilitation Skills for Technical Professionals, Dalhousie University (2017)

Environmental Assessment, Shaw Sandpit, Middleton, NS, 2023 – Project Manager: Coordinated multi-crew field work for various biophysical studies including wetlands, watercourses, fish and fish habitat, lichens, botany, and terrestrial habitat. Lead the compilation and writing of five chapters to support the successful submission of an EARD. Successfully communicated with the client and provincial government to ensure environmental regulations followed.

Geomatics Data Analysis, Mining Projects, NS, 2023-2024 – Data Coordinator: Coordinated data organization, dissemination, and interpretation for client. Completed data analysis and map making for a mining project, sharing data and ensuring accuracy and precision of geospatial information.

Wetland Alteration Approvals, Various Locations, NS, 2023 – Project Manager: Managed the field data collection, data compilation, and reporting for over 30 wetland alteration permit submissions. Coordinated with Nova Scotia Environment and Climate Change on behalf of clients, communicated with the clients to ensure they were in compliance with government regulations. In-depth understanding of municipal and provincial environmental regulations and able to communicate that understanding to clients to help them meet their goals. Facilitated wetland compensation with clients to ensure no net loss of wetland habitat in the province.

Goldboro Gold Mine Environmental Assessments, Goldboro, NS 2020 - 2021 – Environmental Scientist: Coordinated and completed terrestrial field surveys, including wetland, watercourse, fish and fish habitat, avifauna, and habitat surveys. Arranged field crew logistics and communicated with client and project manager. Completed data QA/QC and compilation.

Environmental Baseline Surveys, Quarries and Mining, NS, 2018 - 2023 – Environmental Scientist: Completion and coordination of biophysical baseline data collection, reporting, and effects assessments for multiple gold mine environmental assessment projects (provincial and federal), including surveys of flora, fauna, habitat, avifauna, winter tracking, wetlands, fish and fish habitat.

AREAS OF SPECIALIZATION

- Environmental Assessment
- Flora and Fauna Surveys
- Species at Risk Assessment and Monitoring
- Field Program Planning and Survey Design
- Data Management & Analysis
- Report Writing

RELEVANT EXPERIENCE

Renee MacQuarrie joined the Strum team in 2023 as a Junior Environmental Scientist upon graduating from Dalhousie University's Bachelor of Environmental Science program.

Between her studies at Dalhousie, Renee worked for a number of environmental Non-Profit Organizations throughout Nova Scotia, focusing on Species at Risk Conservation. She has a strong skill set in many areas of environment field work, data analysis, and report writing.

During her undergraduate studies, Renee worked on the Species-at-Risk team at the Unama'ki Institute of Natural Resources, where she monitored Wood Turtle populations, conducted bumble bee research, and assisted with surveying efforts for birds and bats. She later worked as a Field Technician for Birds Canada, conducting surveying and nest monitoring for Chimney Swifts and Bank Swallows. She has also worked as a Research Assistant for Cape Breton Environmental Association, where she focused on marine debris and derelict fishing gear, and for Dalhousie University, where she used GIS software to assess access to green space on school grounds across Canada. Renee is an avid birder and naturalist with strong identification skills across a wide range of taxa and has experience conducting field work in remote and difficult to access areas.

Since joining Strum, Renee has focused primarily on avian field surveys, avian acoustic analysis, and botany surveys. She also holds strong skills in lichen surveys, old growth forest assessment, wetland and watercourse assessment, winter tracking, and various other biophysical survey methods. She has worked on a wide range of different projects throughout Atlantic Canada, including wind energy, transmission lines, green hydrogen/ammonia, solar energy, mines, quarries, and housing development.

REPRESENTATIVE PROJECTS AND ROLES

Environmental Assessments, Various Projects, 2023-Present – Environmental Scientist: Conducts field work, data analysis, and reporting for various projects in Nova Scotia, New Brunswick, and Prince Edward Island. Field work includes avian surveys, botany and lichen surveys, old-growth assessment, wetland and watercourse assessment, winter tracking, pellet group inventory (PGI), and field equipment deployment and maintenance. Completion of desktop review, survey planning, data analysis, budgeting, and writing for Environmental Assessments and other technical reports. Projects include the Goose Harbour Lake Wind Farm Project, Weavers Mountain Wind Energy Project, Ellershouse Wind Farm Project, Melvin Lake Wind Project, Windy Ridge Wind Power Project, Kmtnuk Wind Power Project, Bear Lake Wind Power Project, Mersey River Wind Farm, Higgins Mountain Wind Farm Project, Rhodena Wind Project, Setapuktuk Wind Project, NS-NB Reliability Intertie Project, EverWind Point Tupper Green Hydrogen/Ammonia Project, EverWind Strait Crossing Transmission Line Project, Nova Sustainable Fuels Renewable Energy Park Project, Goldboro Gold Project, and Black Point Quarry Project.

Avian Field Surveys, Various Projects, 2023-Present – Environmental Scientist: Conducts avian field surveys (i.e. point count surveys, area searches, diurnal watch count surveys, nightjar surveys, owl surveys, nest sweeps) for various projects in Nova Scotia, New Brunswick, and Prince Edward Island. Projects include the Goose Harbour Lake Wind Farm Project, Weavers Mountain Wind Energy Project, Ellershouse Wind Farm Project, EverWind Point Tupper Green

EDUCATION

- Bachelor of Science, Major in Environmental Science – Dalhousie University (2022)

TRAINING

- Wetland Ecosystem Services Protocol for Atlantic Canada (WESP-AC) Training (2024)
- Wetland Delineation Training (2024)
- UTV Certification – Canada Safety Council (2023)
- Standard First Aid & CPR/AED – (2025)
- WHMIS (2023)
- Bear Aware Training (2023)

Hydrogen/Ammonia Project, EverWind Strait Crossing Transmission Line Project, Nova Sustainable Fuels Renewable Energy Park Project, and Black Point Quarry Project. Conducts desktop review, scoping, and survey design for avian field programs.

Avian Acoustic Monitoring, Various Projects, 2023-Present – Environmental Scientist: Conducts avian acoustic analysis using a variety of specialized software programs to assess avifauna presence on project sites. Analyses avian nocturnal flight calls to assess nocturnal migratory activity over project sites. Deploys and maintains acoustic monitoring devices. Prepares related technical reports and Environmental Assessment report sections.

Botany and Lichen Surveys, Various Projects, 2023-Present – Environmental Scientist: Conducts botany surveys focused on the identification of Species at Risk and/or Species of Conservation Interest flora. Keeps a full inventory of all plant species encountered during surveys. Optimizes survey transect locations based on habitat characteristics likely to support rare or unique flora. Conducts targeted surveys for Species at Risk lichens. Conducts monitoring and health assessments for Blue Felt Lichen and has experience conducting Blue Felt Lichen translocation.

AREAS OF SPECIALIZATION

- Project Management
- Team Building
- Geographic Information Systems (GIS)
- LiDAR and Remote Sensing
- Natural Resource Management
- Marine Hydrographic Surveys
- Clearance Surveys
- Marine Benthic and Water Sampling
- Underwater Video

COMPUTER EXPERIENCE

- Operating Systems: Windows, OSX, Linux
- Survey Software: HYPACK
- Seismic Software: SonarWiz, Coda
- GPS Software: Trimble Office, Waypoint GPS Processing, GravNav and GravNet
- GIS Software: ArcGIS, GRASS GIS, QGIS
- CAD Software: AutoCAD Civil 3D
- Image Processing: Surfer, CARIS HIPS and SIPS
- Misc. Software: Grapher, Microsoft Office, Global Mapper, SonarPro

EQUIPMENT EXPERIENCE

- GPS Equipment: Assorted Trimble and equipment for autonomous, differential, static, and RTK surveying (Pro XR, 4600, 4800, 5700/5800), Leica RTK, differential static and total stations
- Surveying Equipment: Knudsen BP320 echosounder, SSS Klein 595 and 3000, Teledyne Reson T20P multibeam, Teledyne Reson 7125 multibeam, Odom MB1 and MB2, Integrated Marine Acoustic Profiling System, Magnetometer, and various GPR equipment.
- Misc. Equipment: RBR XR620 CTD Probe and Tide Gauge, Eckman and Van Veen Grab Samplers, Underwater Camera, CNAV 0183 NMEA GPS receivers

RELEVANT EXPERIENCE

Mr. Savelle is the Group Manager of our Geomatics team and with over 15 years' experience. Matt has extensive knowledge of digital modelling, visual renderings, and managing extensive data sets associated with large projects. The Geomatics group is responsible but not limited to wind feasibility studies, constraints analysis, visual simulations, electromagnetic interference, shadow flicker, and noise modelling relating to wind turbine projects. Matt is skilled at producing graphical representations of this data for consumption by members of the public as well as regulatory reviewers. He has consulted regularly with provincial regulatory agencies and other stakeholder groups. Matt is a versatile, conservation-focused with over 15 years in adaptive project management in challenging environments. As Manager of the Geomatics Group, Matt oversees the collection and organization of field data.

His area of speciality is in Marine Geomatics and conducting bathymetric and topographic surveys. He has extensive experience in surveying marine benthic surfaces and shorelines, obtaining overlapping hydrographic (multibeam, single beam and side scan sonar) data, data collection, positioning and navigation, data processing and compilation, plotting and reporting of results. Matt also has experience collecting conventional total station data, RTK and static GPS data, and has been responsible for project set up, establishing GPS control points, and boat mobilization.

EDUCATION

- Centre of Geographic Sciences (COGS), Lawrencetown, Nova Scotia Advanced Diploma in Marine Geomatics (2010)
- Saint Mary's University, Halifax, Nova Scotia Bachelor of Science Degree (BSc) (2009), major in Biology and Minor in Geography

TRAINING

- Marine Basic First Aid
- St. John Ambulance, Level A CPR
- St. John Ambulance, Canadian East Coast Offshore Fitness Certificate
- Med A1 Offshore Survival Systems,
- WHMIS

REPRESENTATIVE PROJECTS AND ROLES

EverWind Fuels Green Hydrogen Project, NS, 2022 - Present - Geomatics Specialist: Project work includes geospatial analysis, supporting external inquiries, and integrating environmental and socioeconomic factors into the assessments.

Wind Farm Projects, NS, 2022 - Present - Geomatics Specialist: Project work includes streamlining field data collection, developing in house habitat modelling, tracking applications, and performing geospatial data analysis.

Marine Survey for Offshore Oil & Gas Support Facilities, Sheet Harbour, NS, 2020 – Detailed marine surveys were conducted as part of the planning and permitting process for a marine facility used to support the offshore oil and gas industry. Bathymetric and multibeam sonar surveys were completed to provide a detailed bottom profile and water depths in areas of Sheet Harbour that will be used for large vessel movements. This information will be used to determine proper clearances for vessels and to determine if additional dredging is required. In addition to collecting this survey information, digital video was captured to document the types of marine habitat in the area to support applications for federal approvals.

Chedabucto Bay Marine Surveys for Aquaculture Facilities, NS, 2020 – As part of the detailed siting of marine aquaculture facilities, bathymetric and single beam sonar surveys were completed to provide a detailed bottom profile and water depths in multiple areas of Chedabucto. In addition to collecting this survey information, digital video was captured along predetermined transects to document marine habitats, and benthic sediment samples were collected with a Van Veen grab for analysis. Marine survey data was processed to generate detailed digital bottom profiles.

St. Marys Bay Marine Surveys for Aquaculture Facilities, NS, 2019-2020 – As part of the detailed siting of marine aquaculture facilities, bathymetric and single beam sonar surveys were completed to provide a detailed bottom profile and water depths in multiple areas of St. Marys Bay. In addition to collecting this survey information, digital video was captured along predetermined transects to document marine habitats, and benthic sediment samples were collected with a Van Veen grab for analysis. Marine survey data was processed to generate detailed digital bottom profiles.

Fundy Isles Cable Route Survey, 2018 – Completed multibeam, sidescan sonar acquisition, processing, and reporting for selecting a cable route from NB to Grand Manan. Reported on impacts to benthic habitat throughout the proposed cable route.

Lake Erie Connector Cable Route Survey, 2014 - Carried out multibeam, sidescan sonar, acquisition, processing, and reporting for selecting a cable route from Canada to USA. Reported on impacts to benthic habitat throughout the proposed cable route.

Canso Causeway Marine Geophysical Survey, 2013 - Carried out multibeam, sidescan sonar, acquisition, processing, and reporting for a stability of the causeway survey. Data was collected to ensure that no rock failures present in the causeway.

Country Harbour SOEP Pipeline Survey, 2011 - Carried out multibeam, sidescan sonar, magnetometer and singlebeam acquisition, processing, and reporting for a pipeline survey. Data was collected to ensure that no pipe was exposed.

Beaufort and Chukchi Sea Ice Scour Mapping Program, 2010-2018 - The primary objectives of the survey were to resurvey specific corridors across the Beaufort and Chukchi Shelf using high resolution geophysical instrumentation to identify and document new scour events. This included the collection of geophysical data such as side scan sonar, microprofiler, and sub-bottom data over various lines and survey sites

St. Clair River Geophysical Survey, 2010 - The objectives of the survey were to identify pipelines in the St. Clair River. Magnetometer and side scan sonar were deployed to search for buried pipe and to classify targets on the river floor. This survey was executed in order to establish safe drilling locations in the river. There were three sites that were surveyed in the St. Clair River. Two of the sites revealed pipelines beneath the river floor. The deliverables included a GIS database (ArcGIS) along with a final written report to the clients' specifications.

AREAS OF SPECIALIZATION

- Remote Sensing
- Geographic Information Systems (GIS)
- Artificial Intelligence (AI) (e.g., Machine Learning and Deep Learning)
- LiDAR
- Photogrammetry
- Location, spatial, and data analytics
- Geoprocessing, Model Building, and automation
- Database management
- Geomorphology
- Hydrologic Modelling

COMPUTER EXPERIENCE

- Operating Systems: Windows, macOS
- GPS Software: Garmin BaseCamp, Trimble Geospatial
- GIS Software: ArcGIS Suite, QGIS, Global Mapper
- Remote Sensing Data Processing: DJI Terra, ArcGIS Pro, Trimble Inpho, POSpac MMS, LAsTools
- Other Software: CorelDRAW X7
- Scripting: Python 2 & 3, SQL

RELEVANT EXPERIENCE

Mr. Opra is a Remote Sensing Scientist working in our Environmental Assessments & Approvals group. Mr. Opra specializes in Geomatics analysis and automation. He has extensive experience in implementing workflows for data analysis and processing. This experience includes integration of Machine Learning and Deep Learning in the environmental modelling, processing LiDAR data, photogrammetry, and automation of geospatial data analysis with both vector and raster data. Further experience involves applying environmental geoscience principals to protect and manage natural environments. In addition, Mr. Opra is experienced in operating a RPAS for data collection.

During his graduate studies, Mr. Opra focused on the application of remote sensing technologies in exploration geology. He investigated LiDAR as an effective means to visualize topography and in further detail, geomorphological features such as folds and glacial structures. He explored the advantages of both RPAS and airplane-acquired LiDAR while reviewing various software for processing and analysis. Mr. Opra helped support the project's RPAS surveys in Trafalgar, Nova Scotia and processed the data to produce high resolution terrain models.

Prior to and following his research contribution, Mr. Opra worked in academia as an advisor, then in the industry as a Geospatial Data Analyst and as a Remote Sensing Analyst. In academia, he assisted with an Honours thesis in developing a geospatial model to automatically detect sinkholes based on LiDAR data. He also assisted in a Master's thesis by mapping legacy gold mine tailings and developing a survey grid for sampling. As a geospatial data analyst, he helped create new data products using multispectral imagery for precision agriculture. Through working on various LiDAR and Photogrammetry projects based throughout the Caribbean, USA, and Canada, Mr. Opra was able to apply automation to photogrammetry procedures and LiDAR processing. His commitment to data quality assurance and control allowed him to develop a deeper understanding of how data is affected by environmental and human factors. His experience in both geology and environmental science allows him to have a strategic approach for geospatial analysis in environmental consulting.

EDUCATION

- Master of Science in Applied Geomatics, Acadia University, Wolfville, NS (2021)
- Advanced Diploma in Geographic Information Systems (GIS), Centre of Geographic Sciences (COGS), Lawrencetown, NS (2020)
- Bachelor of Science, Major in Geology Saint Mary's University, Halifax, NS (2019)

TRAINING

- Standard First Aid and WHMIS (2022)
- RPAS Pilot Certification (2021)
- Over 200 hours ESRI Academy Training (2019 – Present)

Due to the multidisciplinary nature of Geomatics, Mr. Opra developed the ability to anticipate, identify, and solve diverse geospatial problems. Mr. Opra continues to research advancements in technology to build on and develop efficient procedures for data analysis and collection.

REPRESENTATIVE PROJECTS AND ROLES

Environmental Constraint Analysis, NB, NS, NL, 2023-Present – Remote Sensing Scientist: Land cover, landform, and hydro analysis for projects throughout the Maritimes. Using remotely sensed baseline data to create geospatial data products.

Hydrologic Modelling, NB, NS, NL, 2023-Present – Remote Sensing Scientist: Identifying stream networks and creating geospatial data products to guide project designs. Geospatial products that are created, but are not limited to, depth to water, potential wetlands, potential watercourses, and catchment areas for various scale projects. High resolution remotely sensed data (e.g., LiDAR and Multispectral Imagery) is used to gain insights about complex hydrology.

EverWind Fuels Green Hydrogen Project, NS, 2022-Present – Geomatics Specialist: Spearheaded geospatial analysis, supported external inquiries, and integrated environmental and socioeconomic factors in the assessments.

Wind Farm Projects, NS, 2022-Present – Geomatics Specialist: Streamlining field data collection, developed in house habitat modelling, tracking applications, and performing geospatial data analysis.

Sinkhole Delineation Automation, NS, 2021-2022 – Advisor: Assisted in the development of a model within ArcGIS Pro for automating detection and delineation of sinkholes in the Karst prone areas.

LiDAR and Orthoimagery Data Production, Caribbean, USA, and Canada, 2021-2022 – Remote Sensing Analyst: Trajectory processing, LiDAR processing, automation, and creation of data products from inception to delivery.

Multispectral Vineyard Imagery Data Production, California, USA, 2020 – Geospatial Data Analyst: Assisted with the development of new proprietary geospatial products for precision agriculture.

Epiphytic Lichens as Spatial Biomonitorers of Airbourne Mercury and Arsenic, 2019 – Research Intern: Used GPS to map historical mining sites, and designed survey grids for Lichen collection.

Provenance and Diagenesis of Sandstones in the Deep Wells Annapolis G-24, Balvenie B-79, Crimson F-81, Weymouth A-45, and Newburn H-23, Scotian Basin, offshore NS, 2017-2018 – Research Assistant: Creation of graphic models and diagrams using data captured by a scanning electron microscope (SEM) to further research efforts in understanding the geology of the Scotian Basin.

Petrography of Bedrock and Ice-rafted Granules, Flemish Cap, offshore Newfoundland and Labrador, 2017 – Research Assistant: Determining petrographic information of the samples using a scanning electron microscope (SEM). Energy dispersive spectroscopy (EDS) was used to determine mineral composition and backscattered electron images (BSE) where used to identify textures. Graphic design software was used to aggregate the images captured from the SEM.

AREAS OF SPECIALIZATION

- Geographic Information Systems (GIS)
- Field Studies
- Avian Radar Analysis
- Wind Turbine Risk Assessment (Shadow Flicker, Noise Modelling & Visual Simulations)

RELEVANT EXPERIENCE

Mr. Johnson first joined Strum in 2021 as an Environmental Field Technician working in our Environmental Science Group. His area of speciality is in Geographic Information Systems and Remote Sensing. He has extensive experience in data collection in the field, installation of monitoring equipment such as groundwater wells, bird and bat monitoring systems, and working with avian radar datasets and wind turbine analysis software. He is responsible for producing concise and accurate mapping products and incorporating them into the environmental assessment.

More recently, Mr. Johnson has been responsible for the predictive modelling of multiple wind farm projects around the province. This includes the shadow flicker and noise assessment impact on receptors in nearby communities, and photo-simulations visualizing turbines in each study area.

REPRESENTATIVE PROJECTS AND ROLES

Wind Farm Projects, NS, 2021-Present – Geomatics Technician: Responsible for the collection of field data, analysis, and production of accurate GIS mapping products to be used in the reporting process. Avian radar systems were installed and used in various locations of the study area for the purpose of tracking bird activity. Detailed wind turbine risk assessment was conducted for the study area, including noise level and shadow flicker assessments, and photo-simulations visualizing turbines in each potential location.

Transmission Line Moose Tracking Surveys, NS, 2022 – Geomatics Technician: Participated in field assessments for winter wildlife, with a focus on mainland moose and other species at risk. This involved walking predetermined transects through various habitats to identify and document evidence of wildlife such as tracks, scat, and browsing. Additionally, responsible for the post-processing of field data and production of accurate GIS mapping products to be used in the reporting process.

Various Wetland and Watercourse Delineation Projects, NS, 2021 – Present - Geomatics Technician: Responsible for the post-processing of field data and production of accurate GIS mapping products to be used in the reporting process.

EDUCATION

- Centre of Geographic Sciences (COGS), Lawrencetown, Nova Scotia Advanced Diploma in Geographic Information Systems (2020)
- Saint Mary's University, Halifax, Nova Scotia Bachelor of Science Degree (BSc) (2017), major in Geography

TRAINING

- Canadian Drone Pilot Certificate (Basic)
- WHMIS
- ATV Training Course

AREAS OF SPECIALIZATION

- Geographic Information Systems (GIS)
- Spatial data analytics
- Database management
- Data processing and quality control

COMPUTER EXPERIENCE

- GIS software: ESRI Suite, QGIS, PCI Geomatica/Catalyst, GPS-H, TRX, PPP Direct
- Programming: Arcade, SQL, PL/SQL, Python, JavaScript, HTML, CSS
- Database management: PostgreSQL, Microsoft Office Suite, Power Automate

EDUCATION

- Advanced Diploma in Geographic Information Systems (GIS), Centre of Geographic Sciences (COGS), Lawrencetown, NS (2022)
- Bachelor of Environmental Studies, Saint Mary's University, Halifax, NS (2015)

TRAINING

- Over 75 hours ESRI Academy Training (2021 – Present)
- Emergency First Aid CPR Level "C" & AED (2023)
- WHMIS (2023)

RELEVANT EXPERIENCE

Ms. Partridge has been working as a GIS Specialist with Strum Consulting since early 2023. As a part of the Environmental Assessment & Approvals team, she has assisted with various projects concerning wind farm development, wetland and watercourse management, and telecommunications analysis.

Ms. Partridge received a Bachelor of Environmental Studies from Saint Mary's University in 2015 and went on to receive an Advanced Diploma in Geographic Information Systems (GIS) with Honours from the Centre of Geographic Sciences in 2022. During her post graduate studies, Ms. Partridge conducted an analysis of GPS data in relation to the protection of an endangered aquatic species. This involved the restoration of missing or faulty GPS data by processing and analyzing environmental, topographical, and behavioural data to determine the accurate locations. She provided clarity on data errors, outlying species behaviours, and key habitat areas to directly aid in the protection of the species.

Since joining the team at Strum, Ms. Partridge has been involved in a wide range of environmental and industrial assessment projects. This has provided her experience working within both provincial and federal regulations across various governmental bodies and allowed her to gain in-depth knowledge of specialized environmental considerations.

Ms. Partridge has also utilized the ESRI suite of programs to implement and maintain numerous public-facing web mapping applications to facilitate client updates and external communication, as well as continuously develop and improve internal field data collection and management procedures. This has provided the opportunity to become familiar with a wide range of spatial and environmental data management processes and software capabilities.

REPRESENTATIVE PROJECTS AND ROLES

Environmental Assessments and Approvals (2023 – Present) – GIS Specialist: Developed field data collection procedures, data processing and analysis, and provided map products to support projects across numerous departments.

Telecommunications Interference Analysis of Wind Projects within Nova Scotia (2023 - Present) – GIS Specialist: Compiled and processed provincial telecommunications data to analyze the spatial relationships of wind farms in Nova Scotia and surrounding telecommunication towers to identify potential electromagnetic interference (EMI).

Wetland Research Compensation Project (2023 – 2024) – GIS Specialist: Facilitated data collection and compilation related to wet area prediction and protection. Assisted with data analysis to provide summaries of findings to be used in various applications.

AREAS OF SPECIALIZATION

- Geographic Information Systems (GIS)
- Location, Spatial, and Data Analytics
- Database Management
- Geoprocessing, Model Building
- Civic Addressing

COMPUTER EXPERIENCE

- GIS Software: ArcGIS Suite, QGIS
- Other Software: CorelDRAW X7
- Scripting: SQL, Python 2 & 3

RELEVANT EXPERIENCE

Ms. Wallace is a GIS Technician working in the Environmental Assessments and Approvals group. She joined the team in early 2023 and has been helping the GIS team with data analysis and creating mapping products for environmental assessments and other projects.

Ms. Wallace received her Bachelor of Science with Honours in Geology at Saint Mary's University in 2019. While studying at Saint Mary's, Ms. Wallace was a research assistant, and was able to use a variety of tools to aid in the analysis of minerals and in their identification process. Ms. Wallace then went on to receive an Advanced Diploma in Geographic Information Systems at the Centre of Geographic Sciences in 2020.

Before joining Strum, Ms. Wallace worked for the Province of Nova Scotia as part of the Civic Addressing team, where she was able to continue to use GIS and was involved in the emergency management operations during Hurricane Fiona where she analysed data and created a dashboard to help the team with their planning going forward.

REPRESENTATIVE PROJECTS AND ROLES

Wind Farm Projects, NS, 2023 - Present - Geomatics Technician: Compiled and checked collected field data, performed geospatial data analysis, and completed numerous drawings as a visual aid in environmental assessments and other reports.

Detrital Mineral Provenance Analyses from the Cretaceous McMurray Formation, Alberta and the Holocene Portneuf River Delta, North Shore of Quebec (2021) – Research Assistant: Used a scanning electron microscope to determine mineral composition and to identify mineral assemblages in different offshore wells in the Scotian Basin. Supplementary graphs were created to aid in demonstrating mineral assemblages and chemical composition.

Sedimentary Petrology of the Upper Cree Member in the Cohasset A-52 Well, Scotian Basin, Offshore Nova Scotia (2020) – Research Assistant: Used a scanning electron microscope to determine mineral composition and to identify mineral assemblages in different offshore wells in the Scotian Basin. Supplementary graphs were created to aid in demonstrating mineral assemblages and chemical composition.

Electron Microprobe and Scanning Electron Microscope Mineral Analyses of Diagenetic Minerals from Lower Cretaceous Reservoir Sandstone, Scotian Basin, Offshore Nova Scotia (2019) – Research Assistant: Computer software was used to combine all backscattered electron images captured from a scanning electron microscope.

EDUCATION

- Advanced Diploma in Geographic Information Systems (GIS), Centre of Geographic Sciences (COGS), Lawrencetown, NS (2020) ‘
- Bachelor of Science with Honours, Major in Geology, Saint Mary's University, Halifax, NS (2019

TRAINING

- Emergency First Aid CPR Level "C" & AED (2021)
- WHMIS (2023)
- Over 100 hours ESRI Academy Training (2019 – Present)

Detrital Petrology and Provenance of the Logan Canyon Formation Sandstones, Scotian Basin (2019) –

Research Assistant: Analyzed petrographic information from samples using a scanning electron microscope, where mineral composition was determined using Energy dispersive spectroscopy and identification was helped with backscattered electron images using texture and brightness as a guide. Heavy mineral separation and identification was used to determine mineral assemblages and understand origins.

AREAS OF SPECIALIZATION

- Geographic information systems (GIS)
- Data collection and processing
- Aerial surveys
- Marine surveys
- Remote sensing
- Stratigraphic modeling

COMPUTER EXPERIENCE

- GIS Software: ArcGIS Suite, QGIS
- Remote Sensing Data Processing: DJI Terra, ArcGIS Pro
- Other Software: OpenFlow Software Suite, CorelDRAW X3, X7, X8; Grapher, ReefMaster, LogPlot, Microsoft Office 365 Suite, and MinPet

EDUCATION

- Master of Science in Applied Science (Geology), Saint Mary's University, Halifax, Nova Scotia (2020)
- Bachelor of Science Degree (BSc) with Honours, Major in Geology and Minor in Business, Saint Mary's University, Halifax, Nova Scotia (2018)

TRAINING

- Intermediate Workplace First Aid – CPR C and AED
- RPAS Pilot Certification
- WHMIS

RELEVANT EXPERIENCE

Mr. Nagle is a Geomatics Field Technician working in the Environmental Assessments and Approvals Group. He joined the team in early 2024 and has been helping the team with aerial and marine data collection, data management, and various projects involved with wind farm development.

During his graduate studies, Mr. Nagle focused on a multidisciplinary approach to stratigraphic modeling and sediment distribution. This involved data collection, environmental understanding, GIS analysis, and interfacing with industry professionals. He published two peer-reviewed papers from this time, which focused on how different data (or lack thereof) influenced our understanding of sediment distribution in deep-water environments.

While studying for his undergrad at Saint Mary's University, Mr. Nagle worked as a research assistant at the Geological Survey of Canada and Saint Mary's University, performing data collection, analysis, report writing, figure creation, and presentations.

Since joining the team at Strum, Mr. Nagle put his interest in aerial and marine data collection and applying stratigraphic modeling techniques to deep learning model products. This has provided the opportunity to understand a wide range of spatial data products as they relate to the Environmental Assessments and Approvals Group, as well as understand the capabilities and limitations of geospatial software.

REPRESENTATIVE PROJECTS AND ROLES

Environmental Constraint Analysis, AB, NS (2024-2025) – Geomatics Field Technician: Created various constraint map products to aid in environmental assessments. Constructed provincial-wide constraint maps that can be used by Project Management and staff to visually understand the different constraints in their project area.

Aerial and Marine Surveys, NS (2024) – Geomatics Field Technician: Planned and conducted detailed aerial and marine surveys in order to support remote sensing and planning and permitting processes. Spearheaded the setup and operation of the uncrewed surface vessel (USV) and boat for marine surveys.

Wind Farm Projects, NS, NB (2024) – Geomatics Field Technician: Compiled and checked field collected data, collected aerial multispectral data, used various data products to create a deep learning model that can locate potential wet areas, performed geospatial data analysis, and created map products to be included in reports.

Jurassic deep-water reservoirs at a transfer-transform offset: modeling the mixed carbonate-siliciclastic Shelburne subbasin, NS (2020-2024) – Geology Research Assistant: Collected and compiled data from M.Sc. to investigate the role of bathymetry on modeled environments and sediment distribution, and how the model differs from the reference case model proposed in M.Sc. Results were published in AAPG Bulletin and presented to the Nova Scotia Department of Natural Resources and Renewables.

How is stratigraphic modeling in frontier basins dependant on data: A case study of on the Shelburne subbasin, NS (2020-2021) – Geology Research Assistant: Collected and compiled data from M.Sc. to investigate the influence of data on the modeling process. Results were published in Marine and Petroleum Geology.

Stratigraphic Modeling of the Shelburne Subbasin, NS (2018-2020) – Geology Internship and M.Sc.: Compiled and collected geologic data and applied a multidisciplinary approach to modeling the evolution and sediment distribution of the Shelburne Subbasin from the Middle Jurassic (163Ma) to the Late Jurassic (150Ma). The results of this project were used to de-risk oil & gas exploration offshore southern Nova Scotia and show the potential for sandstone reservoirs in deep-water environments.

Petrography and Trace Element Mobility in Rutile, NS, (2017-2020) – Geology Research Assistant: Used a variety of scientific instruments (SEM-EDS, ICP-MS, Ramen Spectroscopy, optical microscopy) to analyze titanium minerals from Clarke Head, NS, to determine mineral formation and how trace elements mobilized through titanium minerals. Compiled results into figures, tables, graphs and reports in order to be used in published papers.

Deltaic Evolution of the Sept Îles Delta, NS, (2018-2019) – Research Assistant: Collected and compiled geologic data to model the deltaic evolution of the Sept Îles Deltaic complex since the last glacial maximum. Aggregated results into a Geological Survey of Canada Open File report.

Marine Sediment Analysis, NS, (2018) – Research Assistant: Collected and analyzed geological data from piston core and box core samples from offshore Nova Scotia using Multi-Sensor Core Logging techniques (magnetic susceptibility, velocity, bulk density, spectrography, digital photography and X-radiography).